

## DOCUMENT RESUME

ED 331 713

SE 052 001

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TITLE Square One TV--Content Analysis and Show Rundowns through Season Three.  
INSTITUTION Children's Television Workshop, New York, N.Y.  
PUB DATE 9 Feb 90  
NOTE 86p.  
PUB TYPE Reports - Evaluative/Feasibility (142)  
  
EDRS PRICE MF01/PC04 Plus Postage.  
DESCRIPTORS Content Analysis; Educational Objectives; \*Educational Television; \*Mathematics Education; \*Problem Solving; \*Programing (Broadcast); Student Attitudes  
IDENTIFIERS \*Square One TV

## ABSTRACT

This report summarizes the mathematical and pedagogical content of the Square One TV library (155 programs) after three seasons of production, relating that content to the three goals of the television series. It also provides a rundown of the shows, with a complete specification of each segment's show number, content, description, format, length, and other information. The goals of the series are: (1) to promote positive attitudes toward, and enthusiasm for, mathematics; (2) to encourage the use and application of problem solving processes; and (3) to present sound mathematical content in an interesting, accessible, and meaningful manner. A complete statement of goals, a list of the 155 Square One TV shows with emphases, and further detail of the analysis of segments according to goals 2 and 3 are appended. (KR)

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**SQUARE ONE TV**

**CONTENT ANALYSIS AND SHOW RUNDOWNS**

**THROUGH SEASON THREE**

**February 9, 1990**

**BEST COPY AVAILABLE**

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c. CTW, 1990

## EXECUTIVE SUMMARY

This report summarizes the mathematical and pedagogical content of the SQUARE ONE TV library after three seasons of production, relating that content to the three goals of the series. It also provides a rundown of the shows, with a complete specification of each segment's show number, content, description, format, length, and other information.

The goals of the series are these:

- I. to promote positive attitudes toward, and enthusiasm for, mathematics;
- II. to encourage the use and application of problem-solving processes; and
- III. to present sound mathematical content in an interesting, accessible, and meaningful manner.

The report includes a detailed elaboration of the goals.

Goal I. 81% of the segments of the series address Goal I by explicitly showing mathematics to be a powerful and widely applicable tool; or an aesthetically pleasing subject; or by showing that it can be understood, used, and even invented, by non-specialists.

Goal II. Of the 579 problem-solving segments that appear in the course of the 155 shows, almost all address Goal II by explicitly illustrating the formulation or treatment of problems. Moreover, 81% model the use of at least one problem-solving heuristic, and 43% incorporate the important stage of problem follow-up (by looking for alternative solutions or extending to related problems, for example).

Goal III. 94% of the segments address Goal III by incorporating one or more of the series' seven mathematical areas (numbers and counting; arithmetic of rational numbers; measurement; numerical functions and relations; combinatorics; statistics and probability; and geometry). 65% involve more than one mathematical topic, thus reinforcing interrelations among mathematical concepts.

## **SQUARE ONE TV**

### **CONTENT ANALYSIS AND SHOW RUNDOWNS THROUGH SEASON THREE**

**SQUARE ONE TV is a library of programs with the potential for a long useful broadcast life. After each production round, we have analyzed every segment of the series in terms of our three goals. The results of our analysis reside in our comprehensive computer database. Aside from the obvious usefulness of this information as a guide for our continuing production efforts, the data has been useful in several other ways. Our three guides for teachers include rundowns of the shows with an index to the series' goals. Our detailed knowledge of the relations of the segments to goals has been a guide to the design of our in-house summative research program, as well to the several externally-funded research programs which employ elements of the series. In general, one can easily compare the content of SQUARE ONE TV with other resources in mathematics education--for example, scope-and-sequence charts of mathematics curricula and local district mathematics programs.**

**This report describes the content of the 155 programs of the SQUARE ONE TV library in terms of its elaborated goal statement (Appendix A). Charts and graphs show the cumulative treatment of objectives for the series' goals. Rundowns of the 40 programs of Season III (Appendix D) include descriptions of each segment of each program. This report should be read as an update of the**

reports<sup>1,2</sup> on the production of Seasons I and II. In particular, those reports include complete rundowns of the 75 and 40 programs of Seasons I and II, respectively, as well as details of their content.

### SQUARE ONE TV GOALS

The series has three goals:

- I. to promote positive attitudes toward, and enthusiasm for, mathematics;
- II. to encourage the use and application of problem-solving processes; and
- III. to present sound mathematical content in an interesting, accessible, and meaningful manner.

People respond to mathematical ideas if they see concepts linked to concrete situations, if the ideas appear beautiful and dynamic, or if they seem accessible to people with whom the viewer can identify. For Goal I, we reviewed each segment in terms of these three motivational criteria, recognizing only what is explicitly exhibited or expressed, not what the viewer may infer.

Goal II operates through segments that illustrate problem-solving behavior and problem-solving heuristics. For our purposes, we recognize three stages of problem-solving behavior: problem formulation, problem treatment, and problem follow-up. Of

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1. Schneider, Aucoin, Schupack, Pierce, and Esty, Square One TV, Season One Content Analysis and Show Rundowns, Children's Television Workshop, 1987.

2. Schneider, Miller, and Esty, Square One TV, Season Two Content Analysis and Show Rundowns, Children's Television Workshop, 1988.

course, problem-solving is rarely linear or so simply described. Instead, a problem solver moves among the three types of behavior, applying a variety of heuristics. The coding sheet on the page 3a illustrates our view of the four problem-solving components which guides our analysis for Goal II. For this purpose, we analyzed only the segments that explicitly pose a problem that is solved in the course of that segment. We analyzed their depiction of problem-solving behavior and use of heuristics.

Goal III involves the presentation of a broad spectrum of mathematics. We aim to provide mathematics which has clear ties to school curricula and also mathematics which would extend viewers' school experience. Our mathematical outline includes seven areas:

- Numbers and Counting;
- Arithmetic of Rational Numbers;
- Measurement;
- Numerical Functions and Relations;
- Combinatorics and Counting Techniques;
- Statistics and Probability; and
- Geometry.

Appendix A includes an outline of each area as we considered it in developing program material. By our use of this outline, we do not mean to establish or suggest boundaries between areas rather than reinforce commonality. In fact, many segments of the series deal with more than one area of mathematics. Moreover we make no attempt to distinguish between primary and secondary topic. In many cases it would be difficult to distinguish primacy and mathematical content is often a function of the viewer's experience and perceptions. For example, to a less

# CONTENT ANALYSIS

## GOAL I

- I. Positive Attitudes and Enthusiasm:**
- A. Powerful and Applicable Tool
  - B. Beautiful Aesthetically Pleasing Subject
  - C. Initiated, Developed, and Understood by Non-Specialist

## OTHER ANALYSIS

- Unanswered questions to viewer
- Invitation to participate
- Calculator use
- Computer use
- Mistakes made and corrected

## GOAL III

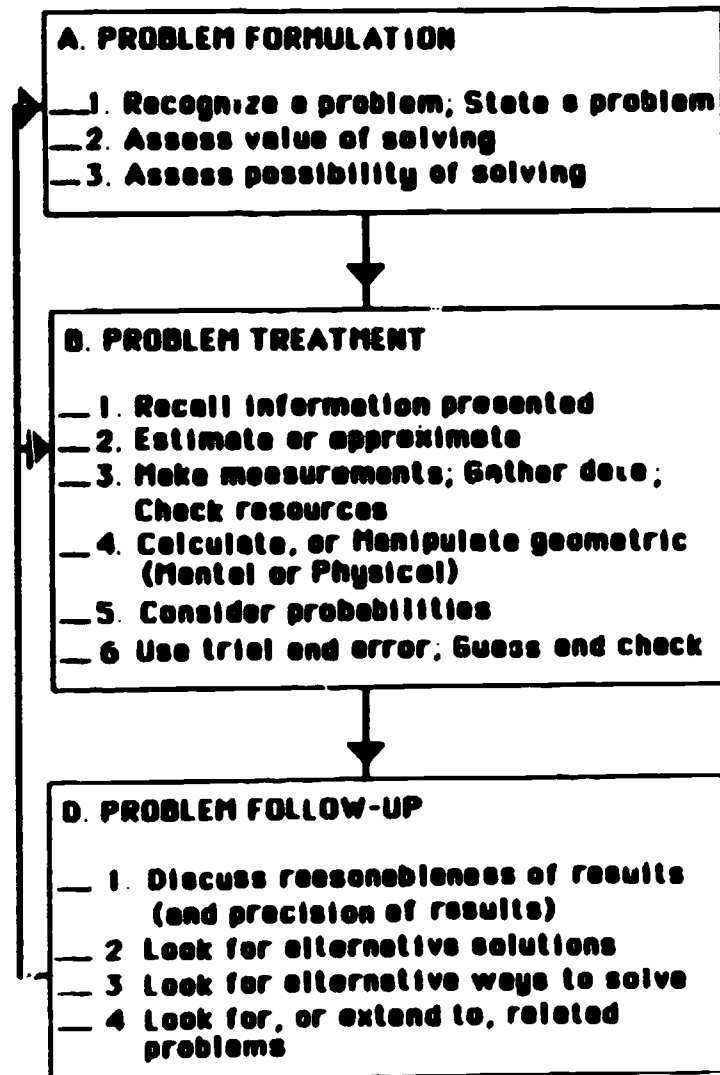
Mathematics Content

PROBSOLV

NOT PROBSOLV

## GOAL II

### ACTION



### HEURISTICS

- C1 REPRESENT PROBLEM**
- a. Scale model, drawing, map
  - b. Picture, Diagram, gadget
  - c. Table, Chart
  - d. Graph
  - e. Use objects; Act out
- C2. TRANSFORM PROBLEM**
- a. Rerword, clarify
  - b. Simplify
  - c. Find subgoals, sub-problems (work backwards)
- C3 LOOK FOR**
- a. Patterns
  - b. Missing info
  - c. Distinctions in kinds of information-pertinent, extraneous
- C4 REAPPROACH PROBLEM**
- a. Change point of view, Reevaluate assumptions
  - b. Generate new hypotheses

Date \_\_\_\_\_

Prod \_\_\_\_\_

Coder \_\_\_\_\_

Title \_\_\_\_\_

sophisticated viewer, But Who's Counting? may appear as a game primarily involving place value, while a more experienced viewer may concentrate on its probabilistic aspects.

## THE SHOWS

In terms of mathematical organization, there are two types of shows: those with a particular mathematical emphasis and those based on a variety of mathematical topics. By definition, the former have a single topic which is the focus of segments comprising about one-third of that show. For example, Show 222, with an emphasis on the arithmetic of multiples of nine, includes a studio sketch, The Amazing Story of Nines; a music video, Nines; and two animations, Multiples of 9 and Dirklet: Divisible by Nine.

The remaining shows present a mixture of mathematics. However, many have a mini-emphasis: two or more segments on the same topic, but running shorter than one-third of the show. For example, show 308 includes three pieces dealing with percents: (Trout on Your Head, Show Remainder #9, and Mathnet: The Case of the Swami Scam, Part 3). A list of the shows with their emphases, if any, appears in Appendix B.

## ANALYSIS OF SEGMENTS

Third season production added 136 segments to the pool from which we assemble programs, bringing the total to 768 segments. Some segments appear more than once in the course of the 155 programs.



For example, many songs run two or three times each. Moreover, some segments appear in seasons after their production. The 155 programs of the library comprise 984 segments, counting repeated segments. The six segment formats<sup>3,4,5</sup> occur with the following frequencies:

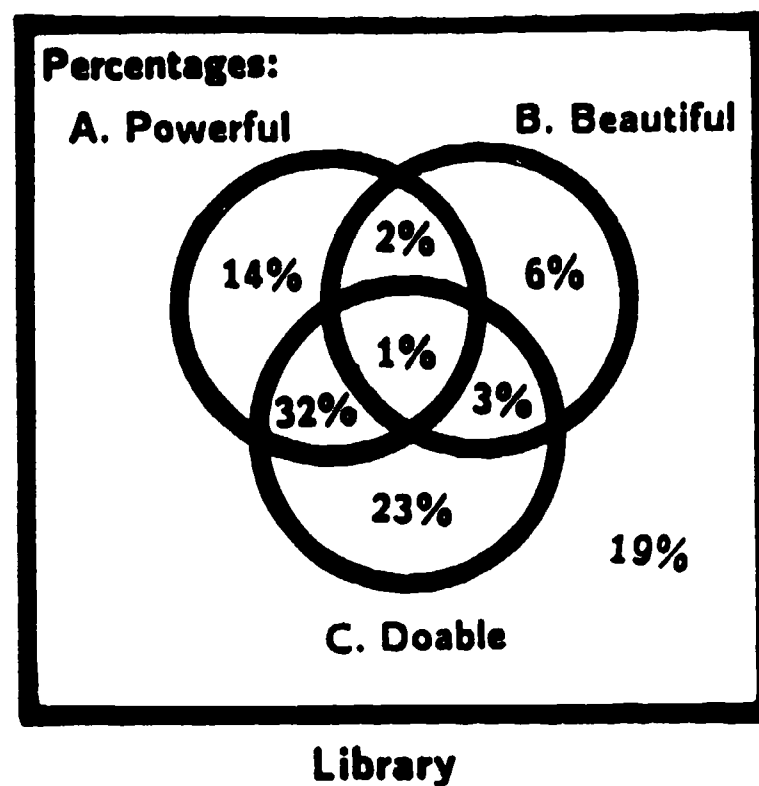
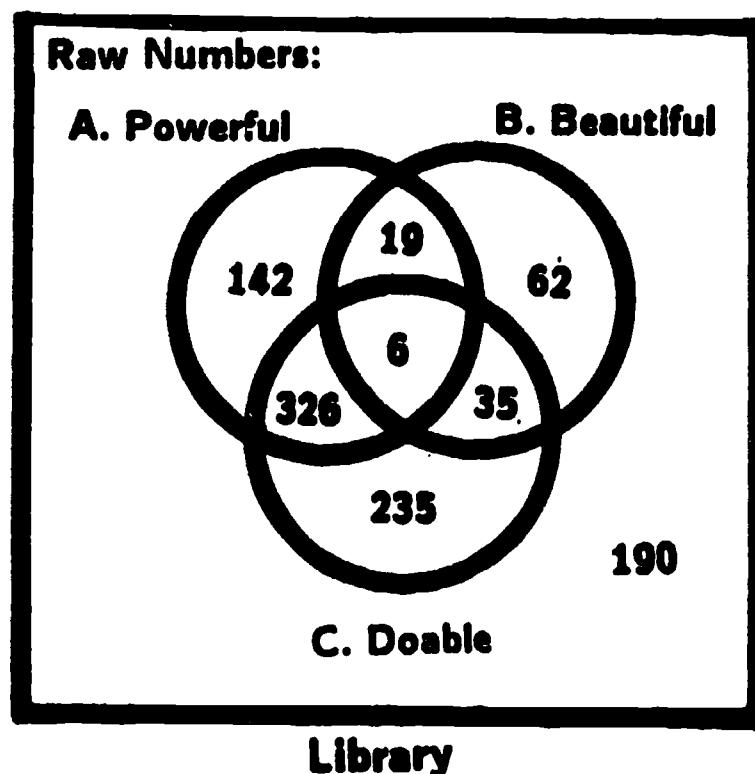
|                  | Season I |       | Season II |       | Season III |       | Library |       |
|------------------|----------|-------|-----------|-------|------------|-------|---------|-------|
| Studio Sketch    | 221      | (41%) | 45        | (19%) | 48         | (23%) | 314     | (32%) |
| Animation        | 101      | (19%) | 82        | (35%) | 41         | (20%) | 224     | (23%) |
| Mathnet Epis. de | 75       | (14%) | 40        | (17%) | 40         | (19%) | 155     | (16%) |
| Song             | 80       | (15%) | 27        | (12%) | 20         | (10%) | 127     | (13%) |
| Game Show        | 28       | (5%)  | 32        | (14%) | 34         | (16%) | 94      | (10%) |
| Live Action Film | 37       | (7%)  | 8         | (3%)  | 25         | (12%) | 70      | (7%)  |
| Total            | 542      |       | 234       |       | 208        |       | 984     |       |

The charts and graphs on the following pages relate the treatment of the goals across the segments. There are two game shows, Square One Squares and Square One Challenge, in which the game questions are independent and carry sufficient content to warrant treating them individually as segments in the tallies rather than the games themselves. Thus the base for the coding consists of 1015 segments<sup>6</sup>.

- 
3. A seventh segment format, the bumper, is a short (typically less than 12 seconds) segue between segments of a show. Bumpers are a prevalent feature of season one programs. We produced 334. Since few of the bumpers are codable to the goals, we exclude them from the statistics.
  4. The careful reader who compares the season one statistics here with those reported in the earlier reports will note a few small discrepancies. They result from correcting occasional errors in recording the coding.
  5. Sixty-three segments have more than one part appearing together in a show, although separated by other segments. Multi-part segments are coded as a single segment.
  6. From the library's 984 segments subtract 15 episodes of the two game shows and add 46 questions.

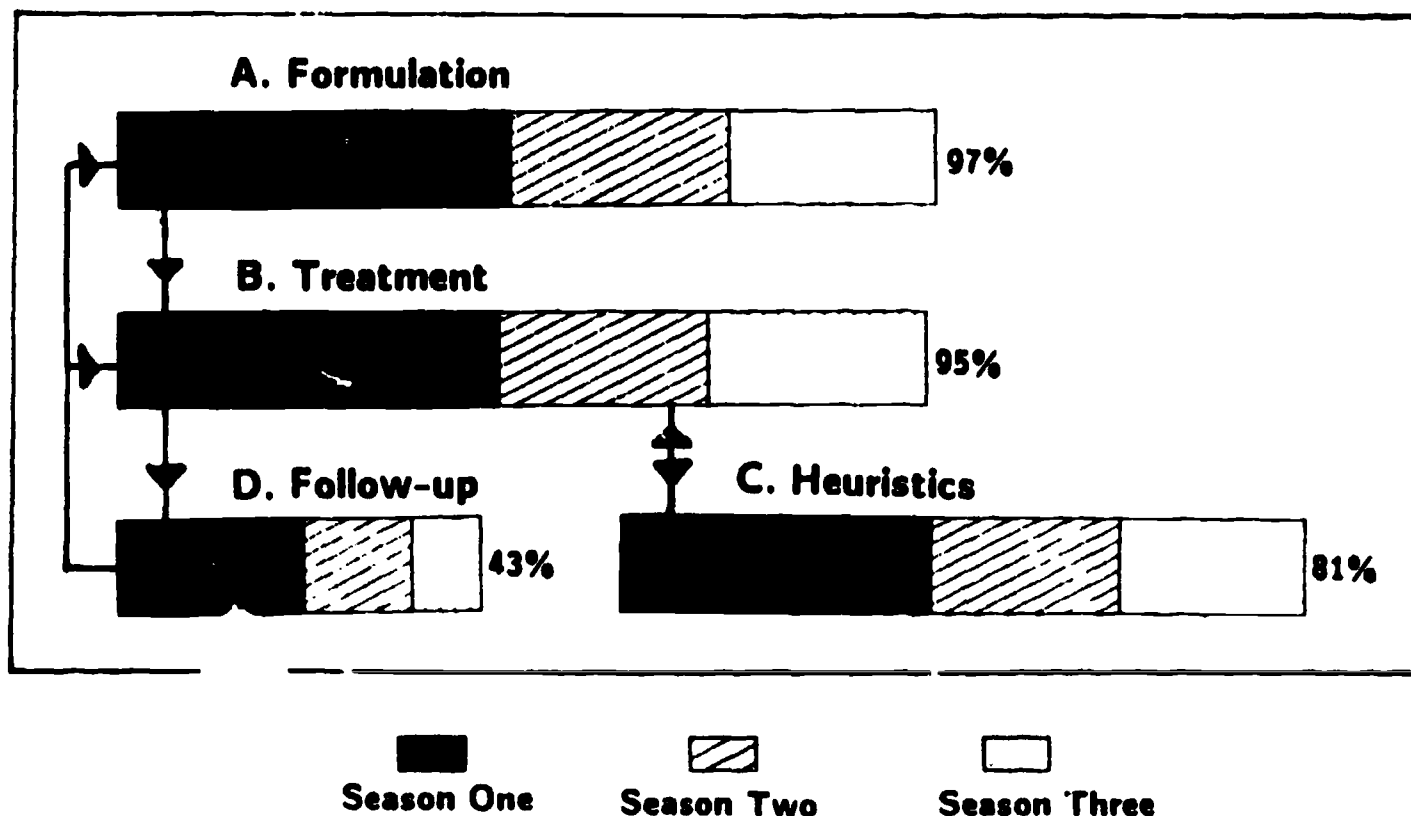
## GOAL I TALLIES

Of the 1015 codable segments, 825 (81%) satisfy one or more of the three criteria for Goal I. The Venn diagrams below show the distribution.



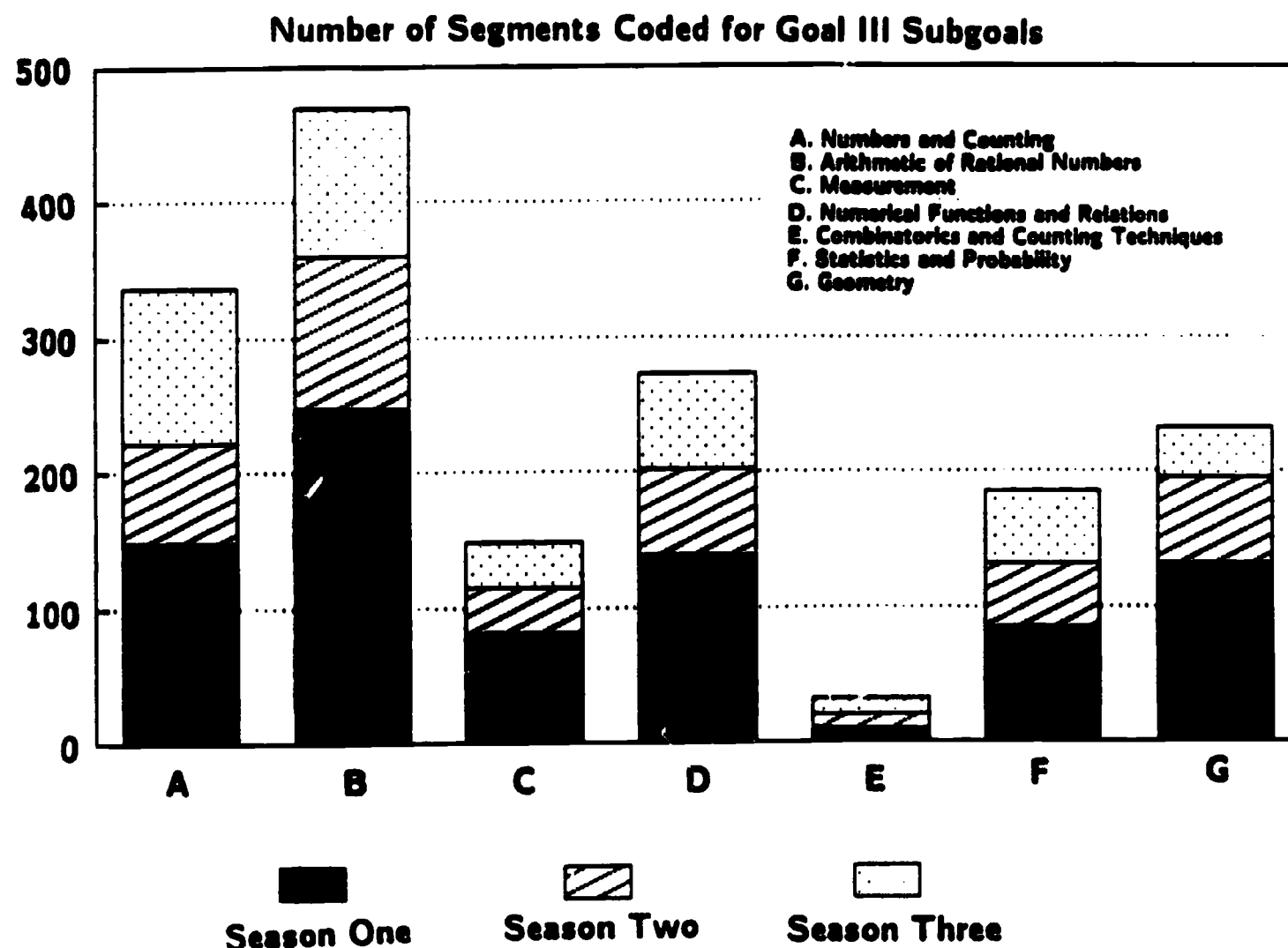
## GOAL II TALLIES

Of the 1015 codable segments, 579 explicitly present a problem for solution within the segment (or within the Square One Squares or Square One Challenge question). The diagram below, which recalls the relations among the four components of problem solving (cf. page 3a), shows the percentage of the 579 which address each of the four Goal II objectives. Note that many segments meet more than one objective. See Appendix C for a finer tally of segments according to the detailed treatment of problem solving in our elaborated goal statement (Appendix A).

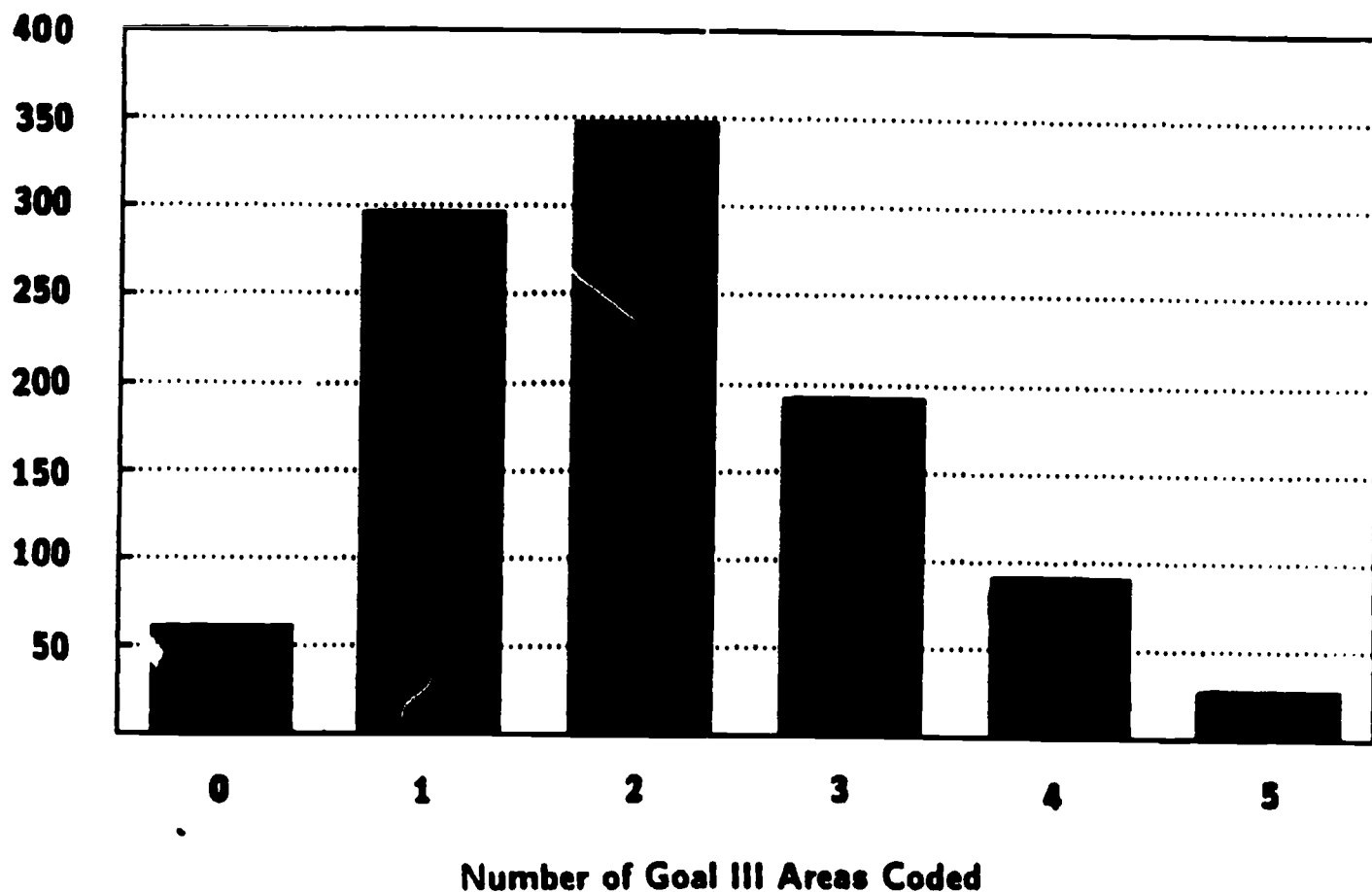


### GOAL III TALLIES

The bar graph below shows the distribution of coding across the seven mathematical areas listed under Goal III. Since many of the 1015 segments involve more than one area of mathematics, the percentages add to more than 100. See Appendix C for a finer tally of segments according to the detailed outline of the mathematical areas in our elaborated goal statement (Appendix A).



**Mathematical Diversity.** Many segments incorporate more than one area of mathematics. The graph below shows the mathematical diversity of the 1015 segments coded for Goal III by reporting the number of multiply-coded segments according to the multiplicities. For example, 192 segments involve mathematics of exactly three subcategories. Of the total, 657 (65%) involve two or more areas of mathematics.



## TALLIES OF SEVERAL OTHER ATTRIBUTES

The table below shows the number of the 1015 segments that exhibit any of several other attributes.

- o While calculator or computer use are not a specific concern of the series, characters use them when it is natural and appropriate.
- o We try to provoke the viewer to direct participation in doing some mathematics integral to a segment, such as playing along in a game show, or by later thinking about an unanswered question.
- o Modeling appropriate behavior in the face of errors or mistakes is part of the design of the series.
- o We make note of segments in which a character makes a mistake and corrects it.

The five tallies are as follows.

|   |     |     |
|---|-----|-----|
| Calculator use                                | 35  | 3%  |
| Computer use                                  | 50  | 5%  |
| Invitation for direct<br>viewer participation | 175 | 17% |
| Unanswered questions                          | 91  | 9%  |
| Errors exhibited                              | 222 | 22% |

## POTENTIAL FOR FURTHER ANALYSIS

We note that other analyses of the content and problem-solving data are possible, but not pursued in this report. In particular, we have not analyzed relationships that may exist among the three goals as they are approached through the series. Some of these relationships are apparent simply from the structure of the subgoals. As an example, one would expect a high percentage of segments that are coded for the problem-solving treatment called "consider probabilities" (Goal IIB5) to occur in situations in which the mathematical content has been coded for probability (Goal IIIF), and in fact 85% of them do. Other connections among goals are not so apparent, however, and would require additional analysis. One might ask, for instance, which specific heuristics (subgoals of Goal IIC) are most frequently associated with the various content subgoals of Goal III. The data provided in Appendix D allows the interested reader to pursue similar questions.

Furthermore, no attempt has been made here to analyze how the percentages of Goal content present in the programs relate to what viewers gain from watching. This is a complex subject; it is discussed in detail in a report of a research study of the first two seasons of SQUARE ONE TV, namely A Study of Children's Problem-Solving Behavior: An Evaluation of the Effects of Square One TV.

**APPENDIX A**

**SQUARE ONE TV**

**COMPLETE STATEMENT OF GOALS**



## **SQUARE ONE TELEVISION--ELABORATION OF GOALS**

- GOAL I. To promote positive attitudes toward, and enthusiasm for, mathematics by showing:**
- A. Mathematics is a powerful and widely applicable tool useful to solve problems, to illustrate concepts, and to increase efficiency.**
  - B. Mathematics is beautiful and aesthetically pleasing.**
  - C. Mathematics can be understood, used, and even invented, by non-specialists.**
- GOAL II. To encourage the use and application of problem-solving processes by modeling:**
- A. Problem Formulation**
    - 1. Recognize and state a problem.**
    - 2. Assess the value of solving a problem.**
    - 3. Assess the possibility of solving a problem.**
  - B. Problem Treatment**
    - 1. Recall information.**
    - 2. Estimate or approximate.**
    - 3. Measure, gather data or check resources.**
    - 4. Calculate or manipulate (mentally or physically).**
    - 5. Consider probabilities.**
    - 6. Use trial-and-error or guess-and-check.**
  - C. Problem-Solving Heuristics**
    - 1. Represent problem: scale model, drawing, map; picture; diagram, gadget; table, chart; graph; use object, act out.**
    - 2. Transform problem: reword, clarify; simplify; find subgoals, subproblems, work backwards.**
    - 3. Look for: patterns; missing information; distinctions in kind of information (pertinent or extraneous).**
    - 4. Reapproach problem: change point of view, reevaluate assumptions; generate new hypotheses.**

**D. Problem Follow-up**

1. Discuss reasonableness of results and precision of results.
2. Look for alternative solutions.
3. Look for alternative ways to solve.
4. Look for, or extend to, related problems.

**GOAL III. To present sound mathematical content in an interesting, accessible, and meaningful manner by exploring:**

**A. Numbers and Counting**

1. Whole numbers.
2. Numeration: role and meaning of digits in whole numbers (place value); Roman numerals; palindromes; other bases.
3. Rational numbers: interpretations of fractions as numbers, ratios, parts of a whole or of a set.
4. Decimal notation: role and meaning of digits in decimal numeration.
5. Percents: uses; link to decimals and fractions.
6. Negative numbers: uses; relation to subtraction.

**B. Arithmetic of Rational Numbers**

1. Basic operations: addition, subtraction, division, multiplication, exponentiation; when and how to use operations.
2. Structure: primes, factors, and multiples.
3. Number theory: modular arithmetic (including parity); Diophantine equations; Fibonacci sequence; Pascal's triangle.
4. Approximation: rounding; bounds; approximate calculation; interpolation and extrapolation; estimation.
5. Ratios: use of ratios, rates, and proportions; relation to division; golden section.

### **C. Measurement**

- 1. Units:** systems (English, metric, non-standard); importance of standard units.
- 2. Spatial:** length, area, volume, perimeter, and surface area.
- 3. Approximate nature:** exact versus approximate, i.e., counting versus measuring; calculation with approximations; margin of error; propagation of error; estimation.
- 4. Additivity.**

### **D. Numerical Functions and Relations**

- 1. Relations:** order, inequalities, subset relations, additivity, infinite sets.
- 2. Functions:** linear, quadratic, exponential; rules, patterns.
- 3. Equations:** solution techniques (e.g., manipulation, guess-and-test); missing addend and factor; relation to construction of numbers.
- 4. Formulas:** interpretation and evaluation; algebra as generalized arithmetic.

### **E. Combinatorics and Counting Techniques**

- 1. Multiplication principle and decomposition.**
- 2. Pigeonhole principle.**
- 3. Systematic enumeration of cases.**

### **F. Statistics and Probability**

- 1. Basic quantification:** counting; representation by rational numbers.
- 2. Derived measures:** average, median, range.
- 3. Concepts:** independence, correlation; "Law of Averages."
- 4. Prediction:** relation to probability.
- 5. Data processing:** collection and analysis.
- 6. Data presentation:** graphs, charts, tables; construction and interpretation.

## **G. Geometry**

- 1. Dimensionality: one, two, three, and four dimensions.**
- 2. Rigid transformations: transformations in two and three dimensions; rotations, reflections, and translations; symmetry.**
- 3. Tessellations: covering the plane and bounded regions; kaleidoscopes; role of symmetry; other surfaces.**
- 4. Maps and models in scale: application of ratios.**
- 5. Perspective: rudiments of drawing in perspective; representation of three-dimensional objects in two dimensions.**
- 6. Geometrical objects: recognition; relations among; constructions; patterns.**
- 7. Topological mappings and properties: invariants.**

**APPENDIX B**

**SQUARE ONE TV**

**LIST OF 155 SHOWS WITH EMPHASES**

| SHOW | MAIN | MINI | EMPHASIS                           |
|------|------|------|------------------------------------|
| 101  |      |      |                                    |
| 102  |      |      |                                    |
| 103  |      |      |                                    |
| 104  | x    |      | Scale                              |
| 105  | x    |      | Percents                           |
| 106  | x    |      | Angles                             |
| 107  | x    |      | Percents                           |
| 108  |      | x    | Volume                             |
| 109  |      | x    | Odd and Even Numbers               |
| 110  | x    |      | Combinatorics                      |
| 111  | x    |      | Probability                        |
| 112  |      |      |                                    |
| 113  | x    |      | Fractions                          |
| 114  |      | x    | Two-dimensional Shapes             |
| 115  |      |      |                                    |
| 116  | x    |      | Spatial Measurement                |
| 117  | x    |      | Area and Perimeter                 |
| 118  | x    |      | Figurate Numbers                   |
| 119  | x    |      | Rounding                           |
| 120  | x    |      | Prime Numbers                      |
| 121  | x    |      | Common Multiples                   |
| 122  |      |      |                                    |
| 123  | x    |      | Area of Irregular Shapes           |
| 124  | x    |      | Factors and Primes                 |
| 125  |      | x    | Multiples                          |
| 126  | x    |      | Data Organization                  |
| 127  | x    |      | Scale                              |
| 128  | x    |      | Probability                        |
| 129  |      | x    | Percent                            |
| 130  |      |      |                                    |
| 131  | x    |      | Place Values                       |
| 132  | x    |      | Metric Measurement                 |
| 133  |      | x    | Tessellations; Fibonacci Sequences |
| 134  | x    |      | Percent                            |
| 135  |      | x    | Rates and Ratios                   |
| 136  | x    |      | Fractions                          |
| 137  |      |      |                                    |
| 138  | x    |      | Parity                             |
| 139  | x    |      | Working Backwards                  |
| 140  | x    |      | Probability                        |
| 141  | x    |      | Angles                             |
| 142  | x    |      | Data Processing                    |
| 143  | x    |      | Geometric Objects                  |
| 144  | x    |      | Spatial Measurement                |
| 145  | x    |      | Additivity                         |
| 146  | x    |      | Square Numbers                     |
| 147  | x    |      | Rounding                           |
| 148  |      | x    | Multiplication                     |
| 149  | x    |      | Functions                          |
| 150  |      |      |                                    |
| 151  |      | x    | Pentominoes                        |
| 152  |      |      |                                    |
| 153  | x    |      | Place Value                        |
| 154  |      | x    | Palindromes                        |

| SHOW | MAIN | MINI | EMPHASIS              |
|------|------|------|-----------------------|
| 155  | x    |      | Quadrilaterals        |
| 156  |      |      |                       |
| 157  | x    |      | Scale                 |
| 158  | x    |      | Data Processing       |
| 159  |      |      |                       |
| 160  |      | x    | Large Numbers         |
| 161  |      | x    | Permutations          |
| 162  |      | x    | Rates                 |
| 163  | x    |      | Probability           |
| 164  | x    |      | Functions (Coding)    |
| 165  | x    |      | Infinity; Parity      |
| 166  | x    |      | Multiples and Factors |
| 167  |      | x    | Tessellations         |
| 168  | x    |      | Fractions             |
| 169  | x    |      | Area and Perimeter    |
| 170  |      | x    | Percents              |
| 171  |      | x    | Metric Measurement    |
| 172  |      |      |                       |
| 173  | x    |      | Logical Thinking      |
| 174  |      |      |                       |
| 175  |      |      |                       |
| 201  |      |      |                       |
| 202  |      | x    | Estimation            |
| 203  |      |      |                       |
| 204  |      |      |                       |
| 205  | x    |      | Modular Arithmetic    |
| 206  |      |      |                       |
| 207  |      |      |                       |
| 208  |      |      |                       |
| 209  |      |      |                       |
| 210  |      | x    | Numerical Patterns    |
| 211  |      |      |                       |
| 212  |      |      |                       |
| 213  |      |      |                       |
| 214  |      |      |                       |
| 215  |      |      |                       |
| 216  |      | x    | Numerical Patterns    |
| 217  |      |      |                       |
| 218  |      | x    | Numerical Functions   |
| 219  |      |      |                       |
| 220  |      |      |                       |
| 221  |      |      |                       |
| 222  | x    |      | Arithmetic of Nines   |
| 223  |      | x    | Triangles             |
| 224  |      | x    | Percents              |
| 225  |      |      |                       |
| 226  |      |      |                       |
| 227  |      |      |                       |
| 228  |      | x    | Triangles             |
| 229  |      |      |                       |
| 230  |      | x    | Numeration            |

| SHOW | MAIN | MINI | EMPHASIS                     |
|------|------|------|------------------------------|
| 231  |      |      |                              |
| 232  |      |      |                              |
| 233  |      | x    | Fibonacci Sequence           |
| 234  |      |      |                              |
| 235  |      |      |                              |
| 236  |      |      |                              |
| 237  |      |      |                              |
| 238  |      |      |                              |
| 239  | x    |      | Data Representation          |
| 240  |      |      |                              |
| 301  |      | x    | Large Numbers                |
| 302  |      |      |                              |
| 303  |      |      |                              |
| 304  |      |      |                              |
| 305  |      | x    | Large Numbers; Geometry      |
| 306  |      |      |                              |
| 307  |      |      |                              |
| 308  |      | x    | Percents                     |
| 309  |      | x    | Large Numbers                |
| 310  |      | x    | Data Representation          |
| 311  |      | x    | Large Numbers; Approximation |
| 312  |      | x    | Multiples                    |
| 313  |      |      |                              |
| 314  |      |      |                              |
| 315  |      | x    | Data Representation          |
| 316  |      |      |                              |
| 317  |      |      |                              |
| 318  |      | x    | Data Representation          |
| 319  | x    |      | Combinatorics                |
| 320  |      |      |                              |
| 321  |      |      |                              |
| 322  |      |      |                              |
| 323  |      | x    | Estimation in Measurement    |
| 324  |      | x    | Negative Numbers             |
| 325  |      |      |                              |
| 326  |      | x    | Rational Numbers             |
| 327  |      |      |                              |
| 328  |      | x    | Multiples                    |
| 329  |      | x    | Percents                     |
| 330  |      |      |                              |
| 331  |      |      |                              |
| 332  |      | x    | Large Numbers                |
| 333  |      |      |                              |
| 334  |      |      |                              |
| 335  |      | x    | Data Representation          |
| 336  |      |      |                              |
| 337  |      |      |                              |
| 338  | x    |      | Fractions                    |
| 339  |      |      |                              |
| 340  |      | x    | Large Numbers                |



**APPENDIX C**

**SQUARE ONE TV**

**FURTHER DETAILS OF ANALYSIS OF SEGMENTS**

**ACCORDING TO GOALS II AND III**

## GOAL II TALLIES

The elaborated goal statement (Appendix A) list 3-6 subheadings for each Goal II objective. Tallies of the treatment of the sub-objectives in the show segments are shown in the following matrix. For example, 558 of the 579 problem-solving segments meet sub-objective A1 (recognize and state a problem).

| Objectives     | Sub-Objectives |     |     |     |    |    |
|----------------|----------------|-----|-----|-----|----|----|
|                | 1              | 2   | 3   | 4   | 5  | 6  |
| A. Formulation | 558            | 106 | 64  | -   | -  | -  |
| B. Treatment   | 188            | 112 | 241 | 327 | 39 | 84 |
| C. Heuristics  | 361            | 246 | 148 | 135 | -  | -  |
| D. Follow-up   | 180            | 62  | 37  | 34  | -  | -  |

## GOAL III TALLIES

The elaborate goal statement (Appendix A) list 3-7 subheadings for each Goal III objective. Tallies of the treatment of the sub-objectives in the show segments are shown in the following matrix. For example, 10 of the 1015 problem-solving segments meet sub-objective C4 (additivity).

| Objectives                    | Sub-Objectives |     |     |    |     |     |   |
|-------------------------------|----------------|-----|-----|----|-----|-----|---|
|                               | 1              | 2   | 3   | 4  | 5   | 6   | 7 |
| A. Numbers and Counting       | 30             | 53  | 109 | 53 | 126 | 21  | - |
| B. Arithmetic                 | 280            | 121 | 57  | 79 | 49  | -   | - |
| C. Measurement                | 47             | 92  | 60  | 12 | -   | -   | - |
| D. Functions                  | 159            | 123 | 0   | 14 | -   | -   | - |
| E. Combinatorics              | 14             | 1   | 6   | -  | -   | -   | - |
| F. Statistics and Probability | 23             | 16  | 8   | 63 | 60  | 78  | - |
| G. Geometry                   | 20             | 41  | 10  | 54 | 6   | 157 | 3 |

**APPENDIX D**

**SQUARE ONE TV**

**SEASON THREE RUNDOWNS**

## Reading the Show Rundowns

Each entry includes descriptive data about a segment from the production data base.

### Line one:

Show number--the first digit signifies the season number;  
Item number--the serial number of the segment in its show;  
Item Title;  
Production number--unique to each segment;  
Item format--a three-letter code;

|     |                                      |
|-----|--------------------------------------|
| ANI | animation                            |
| GAM | game show                            |
| LAF | live-action film                     |
| NET | <u>Mathnet</u> episode               |
| PAR | continuation of a multi-part segment |
| SON | song                                 |
| SOS | game question                        |
| STU | studio sketch                        |

Length--the running time of the segment.

### Line two:

Brief description;

### Last line:

Goal I classification;  
Goal II classification;  
Goal III classification;  
Problem-solving segment (PS)--X stands for "yes".

Example: On the first page of the rundowns, we have, for show number 201, item 3, a studio sketch (STU) entitled Math-Za-Poppin' #5, listed with its brief description, Goal I coding of A and C, several Goal II classifications, and its Goal III coding of "C2 D4". It also qualifies as a problem-solving segment.

Note: The goal content of continuations of multi-part segments (PAR) is ordinarily coded under the first part. Hence the goal classifications for segments marked "PAR" are blank.

# SQUARE ONE TV RUNDOWNS

301- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

301- 2 WANNA BE 30140 SON 2:24  
This is a song which points out that whatever one wants to be, one needs to know math.

GOAL 1: A C GOAL 2: GOAL 3: PS:

301- 3 MATH-ZA-POPPIN' #5 30760 STU 3:41  
Examples of finding the area of a rectangle are shown from Square One files.

GOAL 1: A C GOAL 2: A1 B4 C1a GOAL 3: C2 D4 PS: X

301- 4 BIG NUMBERS - THOUSAND/ MILLION 30450 ANI 0:36  
This segment tells the viewer that it takes a clock only about seventeen minutes to tick off one thousand seconds, and compares this to the time it takes to tick off one million seconds.

GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:

301- 5 WHAT'S MY NUMBER?: 56 30600 GAM 2:52  
Contestants try to find the secret number from a group of 25 by eliminating subsets which do not contain that number.

GOAL 1: A C GOAL 2: A1 B3 B6 C1c C2c C3c GOAL 3: A2 B2 D1 G6 PS: X

301- 6 BIG NUMBERS - MILLION/ BILLION 30460 ANI 0:41  
This segment compares the length of time it takes a clock to tick off one million and then one billion seconds.

GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:

# SQUARE ONE TV RUNDOWNS

301- 7 MATHNET-CASE OF ERSATZ EARTHQUAKE-1 30001 NET 16:41  
The Mathnetters consult a scientist about earthquakes in their investigation of Sybil Divine's prediction of a recent quake. He explains trilateration and the Richter scale to them.

GOAL 1: A GOAL 2: A1 B3 GOAL 3: B1 F4 G4 PS: X  
G5

301- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

302- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

302- 2 OLD PHILOSOPHER 1 31070 STU 2:14  
The Old Philosopher helps viewers out of trouble by reminding them of the formula for the area of a rectangle.

GOAL 1: A C GOAL 2: A1 B1 B4 GOAL 3: D4 G6 PS: X

302- 3 DIRK NIBLICK: STEREO RUNNING (PART 1) 30051 ANI 6:50  
Dirk comes to the aid of Fluff and Fold who have been cheated by Mycroft McBurger. McBurger buys stereo headsets back from them at a price discounted by same percentage as the original markup.

GOAL 1: A GOAL 2: A1 B3 B4 C1c GOAL 3: A5 D1 PS: X  
C2c C4a D1

302- 4 INFINITY - THERE IS NO END 31110 SON 3:27  
This song uses several examples of large numbers to illustrate that infinity is not a large number. Several patterns for building sequences of whole numbers are used to suggest infinite sequences.

GOAL 1: B GOAL 2: GOAL 3: A1 B2 D1 PS:  
D2

# SQUARE ONE TV RUNDOWNS

302- 5 DIRK NIBLICK: STEREO RUNNING (PART 2) 30052 PAR 2:31

GOAL 1: GOAL 2: GOAL 3: PS:

302- 6 SHOW REMAINDER 10 (100% - 55%) 31280 BUM 0:10

GOAL 1: GOAL 2: GOAL 3: A5 PS:

302- 7 WANG SPOT: LEMONADE 30400 LAF 1:25  
Girl describes to a boy how she convinced her brother to give her a loan for her lemonade stand by computing how much profit she would earn.

GOAL 1: A C GOAL 2: A1 B2 B3 B4 C1c GOAL 3: A4 B1 B4 PS: X  
C2c D1 D4

302- 8 PHONER: THE ANSWER IS 2 20500 STU 2:50  
Beverly has a one-sided telephone conversation in which she chooses a number and performs a series of operations that always give her the answer of two.

GOAL 1: A C GOAL 2: GOAL 3: B1 D2 PS:

302- 9 MATHNET-CASE OF ERSATZ EARTHQUAKE-2 30002 NET 7:34  
Mathnetters use a map of past quakes to consider most likely location of future quakes. Ms. Divine promises to predict the Big Quake for \$10 million, and predicts a small one that occurs immediately.

GOAL 1: A GOAL 2: B1 B3 C1a GOAL 3: F5 G5 PS: X

302-10 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

303- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

303- 2 CLOSE CALL #4 (SEASON 3) 30370 GAM 7:50  
Students compete against each other trying to get the closest estimate to: Bottlecaps on a Birdhouse, Hieroglyphics on a Pyramid Wall, and Length of Cardboard Strip dropped from Castle.

GOAL 1: C GOAL 2: A1 B2 GOAL 3: C1 C2 C3 PS: X

303- 3 INSERT: WASHINGTON-MORE THAN ARITH 31124 BUM 0:14  
"There is much more to math than arithmetic."

GOAL 1: C GOAL 2: GOAL 3: PS:

303- 4 TAPPIN' THE RHYTHM 31100 SON 3:20  
This is a song about the relationship between  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , and  $\frac{1}{16}$  notes in music. A tapdancer taps out the beat for each of these fractions.

GOAL 1: B C GOAL 2: GOAL 3: A3 PS:

303- 5 BEAZLEY & THE NUMBERS: 1 - 9 PRIMES 30490 ANI 1:36  
Beazley is shown the list of whole numbers from 1 to 9. He checks the factors of each to determine which are prime numbers.

GOAL 1: C GOAL 2: A1 B1 B4 C1c C2c GOAL 3: B2 PS: X

303- 6 INSERT: SAVION-USE MATH/ YOU'LL BE COOL 31220 BUM 0:15  
"Math is a wonderful tool ... so use it and you'll be cool."

GOAL 1: A C GOAL 2: GOAL 3: PS:

303- 7 ME AND MY SHADOW 13660 STU 2:36  
Debbie Allen discusses dimensionality by comparing her own 3-dimensionality with the 2-dimensionality of her shadow.

GOAL 1: C GOAL 2: GOAL 3: G1 C2 PS:



# SQUARE ONE TV RUNDOWNS

303- 8 INSERT: ELVIS-LIKE A HAMMER 31191 BUM 0:10  
 "Just like a hammer, math is a tool. But the good thing about math is, when you miss, your thumb doesn't hurt."

GOAL 1: A C GOAL 2: GOAL 3: PS:

303- 9 MATHNET-CASE OF ERSATZ EARTHQUAKE-3 30003 NET 10:50  
 The Mathnetters assist the Mayor in a 2x2 analysis of his options. They find, with help from a seismograph scientist, that neither a quake nor an explosion took place during the press conference.

GOAL 1: A GOAL 2: A1 A2 B1 B3 C1c C2c C4a C4b GOAL 3: F5 PS: X

303-10 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

304- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

304- 2 MATH-ZA-POPPIN' #2 30730 STU 6:44  
 Cris interviews Descartes who demonstrates the use of Cartesian coordinates. At Pledge Central, the percent of the goal reached is estimated from a thermometer graph.

GOAL 1: A C GOAL 2: A1 B2 B3 C1b C1c C2c GOAL 3: A5 C3 D1 F6 G1 PS: X

304- 3 POS-NEG JOUST: THE ABYSS +3 PLUS -3 15296 ANI 0:30  
 When three "negative" clay-mation creatures confront three "positive" clay creatures, no clay creatures remain.

GOAL 1: A GOAL 2: GOAL 3: A6 B1 PS:

# SQUARE ONE TV RUNDOWNS

- 304- 4 LIFE RAFT 14160 STU 3:14  
Regardless of how many people there are on a liferaft, if there are zero biscuits, everyone will receive zero biscuits - because zero divided by any number is zero.  
GOAL 1: A C GOAL 2: A1 B4 D1 D4 GOAL 3: B1 PS: X
- 304- 5 INSERT: ELVIS-MOVING NUMBERS 31151 BUM 0:10  
"Mathematics ... it's a lot more than moving numbers around."  
GOAL 1: C GOAL 2: GOAL 3: PS:
- 304- 6 BUT WHO'S COUNTING?: LARGST ODD-CAST OUT 30570 GAM 4:47  
Players arrange five randomly chosen digits to form the largest possible odd number, with a wild spin. To play, they must apply some knowledge of place value and probability.  
GOAL 1: A C GOAL 2: A1 B4 C1b C2c C4a GOAL 3: A2 B2 D1 F4 PS: X
- 304- 7 MATHNET-CASE OF ERSATZ EARTHQUAKE-4 30004 NET 11:32  
The Mathnetters play What do we know and collect more information on Ms. Divine. They are shown a "shaker" machine which was found where Ms. Divine predicted the last quake to the minute.  
GOAL 1: GOAL 2: B1 B3 C2c C3c GOAL 3: PS: X
- 304- 8 LONG CLOSE 31240 BUM 0:44  
GOAL 1: GOAL 2: GOAL 3: PS:
- 305- 1 SHOW OPEN 15950 BUM 0:46  
GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

305- 2 PERSON ON THE STREET: \$10 A DAY 30970 LAF 0:52  
 People on the street are asked: If you spend \$10 day,  
 it will take about 3 1/2 months to spend \$1000. How  
 long will it take to spend one million? One billion?

GOAL 1: B C GOAL 2: A1 B2 GOAL 3: A1 B4 D1 PS: X

305- 3 BIG NUMBERS - MILLION/ BILLION/ TRILLION 30470 ANI 1:04  
 This segment compares the length of time a clock would  
 take to tick off one million, one billion, and one  
 trillion seconds.

GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:

305- 4 MICHIGAN STADIUM: FOOTBALLS (173 MILL) 30960 LAF 1:36  
 The following question is posed to the viewer: How many  
 footballs would it take to fill the entire Michigan  
 Stadium to the top?

GOAL 1: GOAL 2: A1 C1e GOAL 3: C2 C3 PS: X

305- 5 MATHMAN: HEXAGONS 20140 ANI 1:21  
 Mathman plays a video game in which he must eat all  
 polygons which are hexagons.

GOAL 1: C GOAL 2: GOAL 3: G6 PS:

305- 6 INSERT: QUEEN-MATH IS A TOOL 31185 BUM 0:10  
 "Mathematics is like a tool ... use it and solve  
 problems."

GOAL 1: A C GOAL 2: GOAL 3: PS:

305- 7 SQUARE ONE CHALLENGE #10 30240 GAM 8:13  
 Two students try to determine whether each of two cast  
 members is bluffing or telling the truth when answering  
 the questions: Spheres, Mathman Portrait, and Three  
 Nets.

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

- 305- 7 SQUARE ONE CHALLENGE #10 QUESTION 1 30241 SOS  
Two spheres are sliced by planes. One cross section is shown to be circular. Will the other cross section look like ellipse, egg, or circle?  
GOAL 1: C GOAL 2: A1 B4 C1e D4 GOAL 3: G6 PS: X
- 305- 7 SQUARE ONE CHALLENGE #10 QUESTION 2 30242 SOS  
If one portrait of Mathman is 30 cm x 40 cm, how high is another that is in proportion and is 8 cm wide?  
GOAL 1: C GOAL 2: A1 B4 C3c D1 GOAL 3: B5 G4 PS: X
- 305- 7 SQUARE ONE CHALLENGE #10 QUESTION 3 30243 SOS  
If a box with seven sides were dropped and it unfolded, would it look like one of three nets?  
GOAL 1: C GOAL 2: A1 B4 C1e D2 GOAL 3: G2 G5 G6 PS: X
- 305- 8 JOHN MOSCHITA: PETER PIPER S, M, F 17907 STU 0:47  
John Moschita does 3 different versions of the "Peter Piper" tongue twister - slow, medium, and fast. A graph illustrates the different rates as well.  
GOAL 1: A GOAL 2: GOAL 3: F5 F6 B5 PS:  
D2
- 305- 9 MATHNET-CASE OF ERSATZ EARTHQUAKE-5 30005 NET 11:48  
The Mathnetters and the Mayor ask Ms. Divine to predict the outcome of a football game before paying for prediction of the Big Quake. They trick with the score of a game which never took place.  
GOAL 1: GOAL 2: B1 GOAL 3: PS: X
- 305-10 CREDITS 31250 BUM 1:36  
GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

305-11 LONG FRIDAY CLOSE

31380 BUM 0:35

GOAL 1: GOAL 2: GOAL 3: PS:

306- 1 SHOW OPEN

15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

306- 2 DIRK NIBLICK: DOOR TO DOOR BOAR (PART 1) 30101 ANI 5:59  
Dirk helps Fluff and Fold see that they've been swindled by a cookie company. Mr. Cookie misuses fractions and percents to tell them he's doubled their pay.

GOAL 1: A GOAL 2: A1 B3 B4 C1b GOAL 3: A3 A5 D1 PS: X  
C2a C4a D1 D4

306- 3 MATHMAN: PERCENTAGES MORE THAN 1/2 15710 ANI 1:17  
Mathman plays a video game in which he must eat only percentages that are less than 1/2.

GOAL 1: C GOAL 2: GOAL 3: A5 D1 PS:

306- 4 DIRK NIBLICK: DOOR TO DOOR BOAR (PART 2) 30102 PAR 4:11

GOAL 1: GOAL 2: GOAL 3: PS:

306- 5 WHAT'S MY NUMBER?: 77 30610 GAM 2:31  
Contestants try to find the secret number from a group of 25 by eliminating subsets which do not contain that number.

GOAL 1: A C GOAL 2: A1 B3 B6 C1c GOAL 3: A2 B2 D1 PS: X  
C2c G6

306- 6 MATHNET-CASE OF SWAMI SCAM-1 30011 NET 13:32  
Mathnetters interview 3 people who paid a Swami \$5000 for the name of a horse that would win a race. Looking for patterns, they notice that all of the victims are lawyers.

GOAL 1: GOAL 2: A1 B1 B3 C3a GOAL 3: PS: X

# SQUARE ONE TV RUNDOWNS

306- 7 SHORT CLOSE 31230 BUM 0:31

GOAL 1: GOAL 2: GOAL 3: PS:

307- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

307- 2 MATH-ZA-POPPIN' #6 30770 STU 5:27  
Jannette Nelson and Eddy MacDonald sing "Why do I love math?"

GOAL 1: A C GOAL 2: B1 GOAL 3: PS:

307- 3 HARRY'S HAMBURGER HAVEN 14240 STU 2:27  
As the characters attempt to shoot a commercial for Harry's Hamburger Haven, they note the equivalence of decimal, fraction, and percent.

GOAL 1: C GOAL 2: GOAL 3: A4 A5 A3 PS:

307- 4 SHOW REMAINDER 8 (22%) 31260 BUM 0:09

GOAL 1: GOAL 2: GOAL 3: A5 PS:

307- 5 SQUARE ONE CHALLENGE # 4A 30181 GAM 8:24  
Two students try to determine whether each of two cast members is bluffing or telling the truth when answering the questions: Two Boxes for Wacky Net, High/Low Temperatures, and 100 Grid.

GOAL 1: GOAL 2: GOAL 3: PS:

307- 5 SQUARE ONE CHALLENGE # 4A QUESTION 1 30182 SOS  
Which of two boxes is a "wacky" net going to look like?

GOAL 1: C GOAL 2: A1 B4 C1e D2 GOAL 3: G2 G5 G6 PS: X

# SQUARE ONE TV RUNDOWNS

- 307- 5 SQUARE ONE CHALLENGE # 4A QUESTION 2 30183 SOS  
A graph shows the daily high and low temperatures over the course of a week. What day had the lowest high temperature?
- GOAL 1: C GOAL 2: A1 B3 C2b C3c GOAL 3: F2 F6 PS: X
- 307- 5 SQUARE ONE CHALLENGE # 4A QUESTION 3 30184 SOS  
A charts shows one hundred numbers. Most are sixes, some are fives and sevens. What is the sum of the hundred numbers?
- GOAL 1: C GOAL 2: A1 B4 C1e C2c C3a GOAL 3: B1 F2 PS: X
- 307- 6 MATHNET-CASE OF SWAMI SCAM-2 30012 NET 10:50  
Continuing to look for patterns and going back over the facts, Mathnetters discover that all letters were run through the same postage meter, and find that all sent \$5000 to same post office box.
- GOAL 1: A GOAL 2: A1 B1 B3 C3a GOAL 3: F5 PS: X
- 307- 7 LONG CLOSE 31240 BUM 0:44
- GOAL 1: GOAL 2: GOAL 3: PS:
- 308- 1 SHOW OPEN 15950 BUM 0:46
- GOAL 1: GOAL 2: GOAL 3: PS:
- 308- 2 TROUT ON YOUR HEAD 14010 STU 1:10  
This commercial uses a horizontal bar graph to illustrate that most quacks sampled suggest putting a trout on one's head as a headache remedy.
- GOAL 1: A C GOAL 2: A1 B3 D1 C1d GOAL 3: F6 A5 PS: X

# SQUARE ONE TV RUNDOWNS

308- 3 BUT WHO'S COUNTING?: SMALLEST ODD 30560 GAM 4:27  
 Players arrange five randomly chosen digits to form the smallest possible odd five-digit number. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B4 C1b C2c GOAL 3: A2 B2 D1 PS: X  
 F4

308- 4 OLD PHILOSOPHER 2 31080 STU 2:31  
 The Old Philosopher describes to the viewer how to find the weight of a dog when a cat is also in the room. He shows how math solves the problem.

GOAL 1: A C GOAL 2: A1 B1 B3 C2c GOAL 3: C4 PS: X  
 C4a

308- 5 SHOW REMAINDER 9 (68%) 31270 BUM 0:07

GOAL 1: GOAL 2: GOAL 3: A5 PS:

308- 6 YOU CALL THE ANGLE 3 -- 180 (U RAMP) 30700 LAF 0:54  
 A skateboarder demonstrates a turn and the viewer is asked to determine the angle of rotation.

GOAL 1: C GOAL 2: A1 B1 C1b C2a GOAL 3: G2 PS: X

308- 7 IT'S A PALINDROME 14110 SON 2:53  
 A tango dance serves as the backdrop for a song about the definition and generation of palindromes -- numbers that read the same backwards and forwards.

GOAL 1: C GOAL 2: GOAL 3: A2 PS:

308- 8 PERSON ON THE STREET: 350 FOOT HOME RUN 31020 LAF 1:02  
 People on the street are asked: You just hit a homerun, and the ball just rade it over the fence at 350 feet. How far would the ball go if you could hit it 1000 times as far? 1000000 times as far?

GOAL 1: C GOAL 2: A1 B2 GOAL 3: A1 B4 D1 PS: X



# SQUARE ONE TV RUNDOWNS

308- 9 INSERT: ELVIS-ARITHMETIC IS TERRIFIC 31131 BUM 0:13  
 "Arithmetic is terrific but remember...it's just one of the many parts of mathematics."

GOAL 1: C GOAL 2: GOAL 3: PS:

308-10 BEAZLEY & THE NUMBERS: 27 30810 ANI 1:49  
 Beazley is shown a list of eight numbers. He asks 3 questions, each reducing the list by half, to find the secret number.

GOAL 1: C GOAL 2: A1 B3 C1c C2c GOAL 3: A3 B2 B1 PS: X  
 C3c

308-11 MATHNET-CASE OF SWAMI SCAM-3 30013 NET 11:51  
 Looking at the Racing Form, and discussing the odds, Mathnetters figure someone must have gotten a winning horse. Grecco reports on a random sample which shows lawyers and number of letters received.

GOAL 1: A GOAL 2: A1 B1 B3 C3a D3 GOAL 3: A5 F4 F5 PS: X

308-12 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

309- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

309- 2 WORKING BACKWARDS 30090 SON 2:49  
 In this song, the Fat Boys figure out what time they need to start preparing for their performance by taking apart their day. They figure the time needed to sleep, eat, put on make-up, and rehearse.

GOAL 1: A C GOAL 2: A1 B2 B4 C1b GOAL 3: A3 B4 PS: X  
 C1c C2c

# SQUARE ONE TV RUNDOWNS

309- 3 MATH-ZA-POPPIN' #8 30790 STU 4:57  
 Pledge Central asks people to tell 12 of their friends to watch Square One. A chart of the powers of 12 is used to show how quickly the news would spread.

GOAL 1: A C GOAL 2: B2 C1c C2c GOAL 3: B1 C3 D2 PS:

309- 4 BIG NUMBERS - BILLION 30430 ANI 0:30  
 This segment compares one billion to one million, and tells the viewer that one billion seconds is almost 32 years.

GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:

309- 5 MICHIGAN STADIUM: STAMPS (7.9 MILL) 30940 LAF 1:38  
 The following question is posed to the viewer: How many stamps would it take to cover the entire playing field of Michigan Stadium?

GOAL 1: GOAL 2: A1 C1c GOAL 3: C2 C3 PS: X

309- 6 KUBRICK'S RUBE 15250 STU 3:01  
 In order to stop its incessant singing, Irving and Dave give Hank the computer a program he can never finish: start with 3; add 4; stop if the sum is even; if not go back to step two.

GOAL 1: A C GOAL 2: A1 A2 A3 GOAL 3: D1 D2 PS: X

309- 7 MATHNET-CASE OF SWAMI SCAM-4 30014 NET 14:14  
 Mixed reviews of a play suggest that the Swami must have sent out letters covering all possible outcomes. Using logic and patterns they've found, they work backwards to spell out the scam in a chart.

GOAL 1: A GOAL 2: A1 B1 B3 C1c C2c C3a C4a C4b GOAL 3: B1 F5 F6 PS: X

309- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

310- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

310- 2 PIECE OF THE PIE #7 (SEASON 3) 30310 GAM 5:42  
Two teams guess top answers to the survey question "Name something you put under your bed." Team that earns greater percentage guesses top answer to keep in fridge, part of car, eat on Thanksgiving.

GOAL 1: A C GOAL 2: A1 B6 C3b D2 GOAL 3: A5 B1 D1 PS: X  
F6

310- 3 PHONER: THE ANSWER IS 1 20490 STU 2:23  
Cynthia has a one-sided telephone conversation in which she chooses a number and performs a series of operations that always give her the answer of one.

GOAL 1: A C GOAL 2: GOAL 3: B1 D2 PS:

310- 4 MATH-ZA-POPPIN' #3 30740 STU 4:58  
Pledge Central uses bar chart to show pledges for 5 days - there is an upward trend. Letter from gray-haired lady tells how her son was reformed because of his enthusiasm for mathematics.

GOAL 1: A C GOAL 2: C1c C2c GOAL 3: A5 F5 F6 PS:

310- 5 MATHNET-CASE OF SWAMI SCAM-5 30015 NET 12:35  
In the last stage of the scam, the Swami promises the winning lottery number for half a million dollars. Mathnetters catch him when he comes to collect the money from George, disguised as Ms. Elmira.

GOAL 1: A GOAL 2: A1 B1 B3 C1c GOAL 3: B1 E1 F5 PS: X  
F6

310- 6 CREDITS 31250 BUM 1:36

GOAL 1: GOAL 2: GOAL 3: PS:

# **SQUARE ONE TV RUNDOWNS**

**310- 7 SHORT FRIDAY CLOSE 31370 BUM 0:22**

**GOAL 1: GOAL 2: GOAL 3: PS:**

**311- 1 SHOW OPEN 15950 BUM 0:46**

**GOAL 1: GOAL 2: GOAL 3: PS:**

**311- 2 BIG NUMBERS - MILLION 30420 ANI 0:23**  
 This segment shows the numeral for one million and tells the viewer that it takes a clock about eleven and a half days to tick off one million seconds.

**GOAL 1: GOAL 2: GOAL 3: A2 B4 PS:**

**311- 3 CLOSE CALL #5 (SEASON 3) 30380 GAM 7:45**  
 Students compete against each other trying to get the closest estimate to: Money in Strongbox, Ping Pong Balls in Cloud, and Weight of Pig in Pounds.

**GOAL 1: C GOAL 2: A1 B2 C2a GOAL 3: C1 C2 C3 PS: X**

**311- 4 BIG NUMBERS - TRILLION 30440 ANI 0:33**  
 This segment compares one trillion to one billion and to one million. It also tells the viewer that it would take a clock almost 32,000 years to tick off one trillion seconds.

**GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:**

**311- 5 BEAZLEY & THE NUMBERS: NOT FACTORS OF 20 30480 ANI 1:24**  
 Beazley is shown the list of whole numbers from 1 to 9. He determines which are not factors of 20.

**GOAL 1: C GOAL 2: A1 B4 C1c C2c GOAL 3: B2 PS: X**

# SQUARE ONE TV RUNDOWNS

311- 6 TONY AND THE TOGAS 12100 SON 6:25  
A Phoenician singer finds himself recording a song in Rome and learns about Roman numerals in the process.

GOAL 1: GOAL 2: GOAL 3: A2 PS:

311- 7 MATHNET-PARKING METER MASSACRE-1 30021 NET 10:49  
Parking meters are being stolen all over NYC. Mathnetters calculate how much money a thief could get from this. They find a pattern from the map of collection zones. Their pattern fails.

GOAL 1: A GOAL 2: A1 B3 C1a C3a C3b C4a GOAL 3: B1 B4 F3 F4 F5 PS: X

311- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

312- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

312- 2 MATH-ZA-POPPIN' #7 30780 STU 2:47  
Math riddles and pies in the face.

GOAL 1: C GOAL 2: B1 B2 GOAL 3: A3 PS:

312- 3 WHAT'S MY NUMBER?: 63 30530 GAM 2:37  
Contestants try to find the secret number from a group of 25 by eliminating subsets which do not contain that number.

GOAL 1: A C GOAL 2: A1 B2 B3 B6 C1c C2c GOAL 3: B2 B4 D1 G6 PS: X

312- 4 SHOW REMAINDER 7 (22%) 30800 BUM 0:10  
Pie chart representing 22% and asking what percentage of the show remains.

GOAL 1: GOAL 2: GOAL 3: A5 PS:

# SQUARE ONE TV RUNDOWNS

312- 5 BUREAU OF MISSING NUMBERS: 9 15440 STU 1:49  
 Terry Ryan, an investigator, takes information pertaining to the number 9 and inputs this information into her computer. These characteristics include factors, if it is prime or square, etc.

GOAL 1: A GOAL 2: A1 B3 B4 C2c GOAL 3: B2 B3 PS: X

312- 6 NINES 15870 SON 2:34  
 The cast sings a country music tune expressing the idea that the sum of the digits of any multiple of 9 always add up to 9 or a multiple of 9.

GOAL 1: B C GOAL 2: GOAL 3: B2 D2 B1 PS:

312- 7 COUNTRY AND WESTERN MUSIC PITCH 15450 STU 1:56  
 Two country and western singers recount the titles of their greatest hits, all of which make mention of relations involving fractions.

GOAL 1: GOAL 2: GOAL 3: A3 D1 PS:

312- 8 MATHNET-PARKING METER MASSACRE-2 30022 NET 15:26  
 Mathnetters look for a different pattern in the dates of collection. George's apartment is robbed by a man driving a blue van. Appliances and a purse of coins are stolen.

GOAL 1: A GOAL 2: A1 B1 B3 C3a C4b GOAL 3: A5 D2 F5 PS: X

312- 9 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

313- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

313- 2 PERSON ON THE STREET: ONE PIZZA A DAY 30500 LAF 1:14  
 People on the street are asked: If you eat one pizza a day, how long will it take to eat one thousand pizzas? One million pizzas? One billion?

GOAL 1: B C GOAL 2: A1 B1 B2 GOAL 3: A1 B4 D1 PS: X

313- 3 BIG NUMBERS - BILLION 30430 ANI 0:30  
 This segment compares one billion to one million, and tells the viewer that one billion seconds is almost 32 years.

GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:

313- 4 MICHIGAN STADIUM: P'PONG BALLS (24 BILL) 30510 LAF 1:36  
 The following question is posed to the viewer: How many ping-pong balls would it take to fill the Michigan Stadium to the top?

GOAL 1: GOAL 2: A1 C1e GOAL 3: C2 C3 PS: X

313- 5 EB: NUMBER PATTERN #1 15030 ANI 0:27  
 This short animation illustrates a number pattern beginning with  $9 \times 1 + 2 = 11$  and continuing through  $9 \times 123456789 + 10 = 1111111111$ .

GOAL 1: B GOAL 2: GOAL 3: D2 B1 PS:

313- 6 BUT WHO'S COUNTING?: SMALLEST - CAST OUT 30550 GAM 4:51  
 Players arrange five randomly chosen digits to form the smallest possible five-digit number, with a wild spin. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B4 B5 C1b C2c C4a GOAL 3: A2 D1 F4 PS: X

313- 7 IN SEARCH OF THE GIANT SQUID 13480 STU 3:51  
 The navigator of a submarine fails to consider the concept of scale -- and mistakenly thinks that they are only centimeters away from a giant iceberg.

GOAL 1: A C GOAL 2: A1 B3 B4 D1 D4 C1a GOAL 3: C1 G4 PS: X

# SQUARE ONE TV RUNDOWNS

313- 8 MATHNET-PARKING METER MASSACRE-3 30023 NET 14:27  
 Mathnetters find the thief is Peter Pickwick who makes an extra copy of the meter collection schedule. A reporter prints George's story that one of his coins is valuable, and another meter is smashed.

GOAL 1: GOAL 2: A1 B1 B3 C3a GOAL 3: PS: X

313- 9 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

314- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

314- 2 DIRK NIBLICK: WORLD OF ROUNDING (PART 1) 30121 ANI 4:09  
 Fluff and Fold round the prices of toys to the nearest ten. One rounds up, the other down. When they don't have enough money to pay, Dirk shows them why.

GOAL 1: A GOAL 2: A1 B1 B2 C1c GOAL 3: B1 B4 PS: X

314- 3 PHONER: THE ANSWER IS 3 15970 STU 2:23  
 Arthur has a one-sided telephone conversation in which he chooses a number and performs a series of operations that always give him the answer of 3.

GOAL 1: A C GOAL 2: GOAL 3: D2 B1 PS:

314- 4 DIRK NIBLICK: WORLD OF ROUNDING (PART 2) 30122 PAR 3:29

GOAL 1: GOAL 2: GOAL 3: PS:



# SQUARE ONE TV RUNDOWNS

314- 5 PIECE OF THE PIE #1 (SEASON 3) 30250 GAM 6:02  
Two teams guess the top answers to the survey question  
"Parents often say don't forget to..." Team that earns  
greater percentage guesses top answer to cheese, jewel,  
and language.

GOAL 1: A C GOAL 2: A1 B3 B6 C3b D2 GOAL 3: A5 B1 D1 PS: X  
F6

314- 6 MATHNET-PARKING METER MASSACRE-4 30024 NET 11:10  
From a pattern relating the van's delivery spots and the  
meter massacres, the Mathnetters deduce that the robber  
is looking for George's "valuable" coin.

GOAL 1: GOAL 2: A1 B1 B3 C3a GOAL 3: PS: X  
C4b

314- 7 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

315- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

315- 2 MATH-ZA-POPPIN' #5 30760 STU 3:41  
Examples of finding the area of a rectangle are shown  
from Square One files.

GOAL 1: A C GOAL 2: A1 B4 C1a GOAL 3: C2 D4 PS: X

315- 3 MATHMAN: EXTRA SHORT 15660 ANI 0:27  
Before Mathman can begin his video game, Mr. Glitch eats  
him.

GOAL 1: C GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

315- 4 INSERT: BALLERINA-NEVER LOSE IT 31162 BUM 0:13  
 "One of the best things about math is ... it is absolutely free! Once you learn it, you'll never lose it."

GOAL 1: C GOAL 2: GOAL 3: PS:

315- 5 SQUARE ONE CHALLENGE # 6 30200 GAM 7:26  
 Two students try to determine whether each of two cast members is bluffing or telling the truth when answering the questions: Book, Darts, and Nets for Box without Top.

GOAL 1: GOAL 2: GOAL 3: PS:

315- 5 SQUARE ONE CHALLENGE # 6 QUESTION 1 30201 SOS  
 A book was bought for \$12, fifty percent of its original price. What was the original price of the book?

GOAL 1: C GOAL 2: A1 B4 GOAL 3: A5 PS: X

315- 5 SQUARE ONE CHALLENGE # 6 QUESTION 2 30202 SOS  
 Can six darts be thrown at a dartboard and hit a total of exactly 40?

GOAL 1: C GOAL 2: A1 B6 C1e GOAL 3: B1 D1 PS: X

315- 5 SQUARE ONE CHALLENGE # 6 QUESTION 3 30203 SOS  
 Can any of three nets be folded to make a box without a top?

GOAL 1: C GOAL 2: A1 B4 C1e D2 GOAL 3: G2 G5 G6 PS: X

315- 6 MATHNET-PARKING METER MASSACRE-5 30025 NET 13:57  
 Mathnetters play What Do We Know and use a map to find a pattern connecting the van's deliveries and the appliance robberies. They use logic to eliminate all but one location which they stake out.

GOAL 1: GOAL 2: A3 B1 B3 C1a GOAL 3: F5 G4 PS: X  
 C3a C4a C4b D2

# SQUARE ONE TV RUNDOWNS

315- 7 CREDITS 31250 BUM 1:36

GOAL 1: GOAL 2: GOAL 3: PS:

315- 8 LONG FRIDAY CLOSE 31380 BUM 0:35

GOAL 1: GOAL 2: GOAL 3: PS:

316- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

316- 2 TAPPIN' THE RHYTHM 31100 SON 3:20  
This is a song about the relationship between  $1/2$ ,  $1/4$ ,  $1/8$ , and  $1/16$  notes in music. A tapdancer taps out the beat for each of these fractions.

GOAL 1: B C GOAL 2: GOAL 3: A3 PS:

316- 3 WHAT'S MY NUMBER?: 27 30670 GAM 3:15  
Contestants try to find the secret number from a group of 25 by eliminating subsets which contain that number.

GOAL 1: A C GOAL 2: A1 B3 B6 C1c C2c C3c GOAL 3: B2 D1 D2 PS: X

316- 4 INSERT: SAVION-USE MATH/ YOU'LL BE COOL 31220 BUM 0:15  
"Math is a wonderful tool ... so use it and you'll be cool."

GOAL 1: A C GOAL 2: GOAL 3: PS:

316- 5 BLACKSTONE: COIN MINDREADING 13447 STU 3:26  
Blackstone asks a spectator to count the number of coins on the table, add the digits, and subtract that number of coins. (9 coins now remain). Blackstone can easily identify the number removed next.

GOAL 1: GOAL 2: GOAL 3: B1 PS:

# SQUARE ONE TV RUNDOWNS

316- 6 SHOW REMAINDER 11 (38%) 31290 BUM 0:08

GOAL 1: GOAL 2: GOAL 3: A5 PS:

316- 7 MATHNET-CASE OF THE UNKIDNAPPING-1 30131 NET 16:46  
Eve, old college friend of Kate, describes the distribution of "points" for the Broadway play in which she is understudy for the star.

GOAL 1: C GOAL 2: A1 B4 GOAL 3: A5 B1 C1 PS: X  
C3

316- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

317- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

317- 2 BUT WHO'S COUNTING?: LARGST 3 X 1 DIG 30580 GAM 4:09  
Players arrange five randomly chosen digits to form the largest possible product of a 3-digit and a 1-digit number. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B4 C1b C2c GOAL 3: A2 D1 F4 PS: X  
D2

317- 3 MATHMAN: SYMMETRY 20180 ANI 1:36  
Mathman plays a video game in which he must eat all polygons which have a line of symmetry.

GOAL 1: C GOAL 2: GOAL 3: G2 PS:

# SQUARE ONE TV RUNDOWNS

- 317- 4 MATH-ZA-POPPIN' #2 30730 STU 6:44  
Cris interviews Descartes who demonstrates the use of Cartesian coordinates. At Pledge Central, the percent of the goal reached is estimated from a thermometer graph.
- GOAL 1: A C GOAL 2: A1 B2 B3 C1b C1c C2c GOAL 3: A5 C3 D1 F6 G1 PS: X
- 317- 5 MATHNET-CASE OF THE UNKIDNAPPING-2 30132 NET 14:36  
Ms. Bacchanal is kidnapped. Stage manager shows Mathnetters his "eagle-mirrors" but they learn that these are blocked by scenery during the show.
- GOAL 1: A GOAL 2: A1 B3 C3b C4b GOAL 3: A5 B1 G2 PS: X
- 317- 6 LONG CLOSE 31240 BUM 0:44
- GOAL 1: GOAL 2: GOAL 3: PS:
- 318- 1 SHOW OPEN 15950 BUM 0:46
- GOAL 1: GOAL 2: GOAL 3: PS:
- 318- 2 SQUARE ONE CHALLENGE # 2 30160 GAM 8:18  
Two students try to determine whether each of two cast members is bluffing or telling the truth when answering questions: Four Color Spinner, Candy Bars, and Stacked Cubes.
- GOAL 1: GOAL 2: GOAL 3: PS:
- 318- 2 SQUARE ONE CHALLENGE # 2 QUESTION 1 30161 SOS  
A spinner shows four equal regions, one colored red. If you spin the spinner one hundred times, about how often would you expect it to stop on red?
- GOAL 1: C GOAL 2: A1 B5 C1b D3 GOAL 3: A3 B5 F4 PS: X

# SQUARE ONE TV RUNDOWNS

- 318- 2 SQUARE ONE CHALLENGE # 2 QUESTION 2 30162 SOS  
A candy bar is cut into five equal pieces. Another candy bar of the same size is cut into four equal pieces. Which candy bar would have the bigger pieces?  
GOAL 1: C GOAL 2: A1 B4 C1e GOAL 3: A3 PS: X
- 318- 2 SQUARE ONE CHALLENGE # 2 QUESTION 3 30163 SOS  
Two cubes of the same size are stacked. A ribbon goes around the cubes two times in the vertical direction, how many times will the ribbon go around in the horizontal direction?  
GOAL 1: C GOAL 2: A1 B4 C1e C2c GOAL 3: C2 G6 PS: X
- 318- 3 YOU CALL THE ANGLE 4 -- 540 30710 LAF 0:56  
A skateboarder demonstrates a turn and a half, and the viewer is asked to determine the angle of rotation.  
GOAL 1: C GOAL 2: A1 B1 C1b C2a GOAL 3: G2 PS: X
- 318- 4 PHONER: THE ANSWER IS 5 20510 STU 2:03  
Arthur has a one-sided telephone conversation in which he chooses a number and performs a series of operations that always give him the answer of five.  
GOAL 1: A C GOAL 2: GOAL 3: B1 D2 PS:
- 318- 5 EB: PONG GAME 15180 ANI 0:19  
This animation illustrates billiard geometry and shows a ball rebounding from wall to wall before finally exiting the one opening.  
GOAL 1: B GOAL 2: GOAL 3: G2 G6 PS:
- 318- 6 MICHIGAN STADIUM: FRISBEES (98 THOU) 30920 LAF 1:35  
The following question is posed to the viewer: How many frisbees would it take to cover the entire playing field of Michigan Stadium?  
GOAL 1: GOAL 2: A1 C1e GOAL 3: C2 C3 PS: X

# SQUARE ONE TV RUNDOWNS

318- 7 MATHNET-CASE OF THE UNKIDNAPPING-3 30133 NET 14:07  
George uses floor plan to show how kidnapping could have occurred. Reminded of Stringbean case, Mathnetters try decoding tape of touch tones as phone number, alphabet code, then as letters on phone.

GOAL 1: A GOAL 2: A1 A3 B1 B3 B6 GOAL 3: B4 E1 F5 PS: X  
C1c C3a C4a C4b

318- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

319- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

319- 2 MATH-ZA-POPPIN' #4 30750 STU 4:43  
Super Guy recaps finding how many combinations of capes/belts he could make. Pie chart shows percent of goal hoped for in next hour and where they would be if they got the maximum received so far.

GOAL 1: A C GOAL 2: A1 B3 B4 C1c GOAL 3: E1 PS: X  
C3a D4

319- 3 WANNA BE 30140 SON 2:24  
This is a song which points out that whatever one wants to be, one needs to know math.

GOAL 1: A C GOAL 2: GOAL 3: PS:

319- 4 BLACKSTONE: 1 - 8 MIND READING 13445 STU 2:53  
Blackstone has 4 slips of paper numbered 1-2,3-4,5-6,7-8 on front and back. Because all the odd numbers are face up, when a spectator turns over any of the paper slips, the answer will always be 17.

GOAL 1: GOAL 2: GOAL 3: B3 D2 PS:

# SQUARE ONE TV RUNDOWNS

319- 5 BEAZLEY & THE NUMBERS: 6 30840 ANI 1:58  
 Beazley is show a list of eight numbers (triangular numbers). He asks 3 questions, each reducing the list by half, to find the secret number.

GOAL 1: C GOAL 2: A1 B3 C1c C2c GOAL 3: A3 B2 B3 PS: X  
 C3c

319- 6 MATHNET-CASE OF THE UNKIDNAPPING-4 30134 NET 15:31  
 Using logic to eliminate many of the half a million possibilities, George decodes the message to find Ms. Bacchanal. She accuses Eve of leading the kidnapping.

GOAL 1: A GOAL 2: B1 B3 B6 C1c GOAL 3: E1 F5 PS: X  
 C3a C4b D1

319- 7 SHORT CLOSE 31230 BUM 0:31

GOAL 1: GOAL 2: GOAL 3: PS:

320- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

320- 2 PERSON ON THE STREET: BRUSH TWICE A DAY 30980 LAF 0:51  
 People on the street are asked: If you brush your teeth 2 times a day, it will take almost 3 years to brush them 2000 times. How long will it take to brush them 2 million times? 2 billion?

GOAL 1: C GOAL 2: A1 B1 B2 B4 GOAL 3: A1 B4 D1 PS: X

320- 3 WHAT'S MY NUMBER?: 41 30650 GAM 2:39  
 Contestants try to find the secret number from a group of 25 by eliminating subsets which contain that number.

GOAL 1: A C GOAL 2: A1 B3 B5 C1c GOAL 3: B2 D1 PS: X  
 C2c



# SQUARE ONE TV RUNDOWNS

320- 4 OOPS! 34 X 12 20480 STU 1:42  
A confused character makes a mistake when multiplying 34 x 12 which causes a stock-footage disaster.

GOAL 1: A GOAL 2: A1 A2 B4 D1 GOAL 3: B1 PS: X

320- 5 INFINITY - THERE IS NO END 31110 SON 3:27  
This song uses several examples of large numbers to illustrate that infinity is not a large number. Several patterns for building sequences of whole numbers are used to suggest infinite sequences.

GOAL 1: B GOAL 2: GOAL 3: A1 B2 D1 PS:  
D2

320- 6 MATHNET-CASE OF THE UNKIDNAPPING-5 30135 NET 17:07  
George ties himself up in same knots used on Ms. Bacchanal. Mathnetters play "What do we know," and check bank balances of show. They use logic to prove Ms. Bacchanal kidnapped herself.

GOAL 1: A GOAL 2: B1 B3 B6 C1e GOAL 3: E1 F5 PS: X  
C4a C4b D1

320- 7 CREDITS 31250 BUM 1:36

GOAL 1: GOAL 2: GOAL 3: PS:

320- 8 LONG FRIDAY CLOSE 31380 BUM 0:35

GOAL 1: GOAL 2: GOAL 3: PS:

321- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

321- 2 PERSON ON THE STREET: SCORE 20 POINTS 31010 LAF 0:57  
 People on the street are asked: Suppose you play basketball every day and you score 20 points per day. Estimate how long it would take to score one million points, one billion points.

GOAL 1: C GOAL 2: A1 B2 GOAL 3: A1 B4 D1 PS: X

321- 3 INSERT: WASHINGTON-DON'T BE A FOOL 31204 BUM 0:07  
 "Mathematics' a wonderful tool ... so use it and don't be a fool."

GOAL 1: A C GOAL 2: GOAL 3: PS:

321- 4 SQUARE ONE CHALLENGE # 7A 30211 GAM 8:09  
 Two students try to determine whether each of two cast members is bluffing or telling the truth when answering the questions: Trains, Boxes with Blue Squares, and 3:2 Ice Cream Scoops.

GOAL 1: GOAL 2: GOAL 3: PS:

321- 4 SQUARE ONE CHALLENGE # 7A QUESTION 1 30212 SOS  
 Two trains start toward each other at the same time, traveling at different speeds. Some time later they meet. Which train traveled for the longer time?

GOAL 1: C GOAL 2: A1 B1 C1e C3c GOAL 3: PS: X

321- 4 SQUARE ONE CHALLENGE # 7A QUESTION 2 30213 SOS  
 What will the two boxes look like when they are glued together so that the blue squares on them are perfectly aligned?

GOAL 1: C GOAL 2: A1 B4 C1e D2 GOAL 3: G2 PS: X

321- 4 SQUARE ONE CHALLENGE # 7A QUESTION 3 30214 SOS  
 Twenty-five scoops of ice cream are ordered. If three scoops of eggplant are ordered for every two scoops of carrot, how many eggplant scoops are ordered?

GOAL 1: C GOAL 2: A1 B4 C1e C2a GOAL 3: B5 PS: X  
 C2c C3c

# SQUARE ONE TV RUNDOWNS

321- 5 MATH-ZA-POPPIN' #1 30720 STU 4:00  
 Pledge Central uses a pictograph to show the number of calls received per hour and a pie chart to show the percent of the goal reached. Larry estimates the distance from NYC to KY Derby using a map.

GOAL 1: A C GOAL 2: B1 C1b C1c GOAL 3: A3 A5 C3 PS:  
 F5 F6

321- 6 MATHMAN: EVEN NUMBERS 15590 ANI 0:58  
 Mathman plays a video game in which he must eat only even numbers.

GOAL 1: C GOAL 2: GOAL 3: B3 PS:

321- 7 YOU CAN COUNT ON IT 16680 SON 1:58  
 This song presents various ways that math shows up in the world.

GOAL 1: A C GOAL 2: GOAL 3: C1 PS:

321- 8 MATHNET-STRATEGIC WEATHER INITIATIVE-1 30031 NET 10:57  
 Mathnetters use maps to secure a weather plane in as much area as possible with as few people as possible. They discover that the plane has been stolen, and use logic to determine when this occurred.

GOAL 1: A GOAL 2: A1 B3 GOAL 3: A5 F4 F5 PS: X

321- 9 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

322- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

322- 2 DIRK NIBLICK: BOOBALAHS (PART 1) 30061 ANI 7:32  
 Dirk saves the Boobalahs from their dishonest manager.  
 When calculating their 90% share of ticket sales, the  
 manager incorrectly places the decimal point.

GOAL 1: A GOAL 2: A1 B1 B2 B4 C1c GOAL 3: A5 B1 PS: X  
 C4a D1

322- 3 OLD PHILOSOPHER 3 31090 STU 2:21  
 Old Philosopher recalls for viewers many situations  
 where math would have helped them. He points out that  
 it is never too late to learn math.

GOAL 1: A C GOAL 2: GOAL 3: PS:

322- 4 DIRK NIBLICK: BOOBALAHS (PART 2) 30062 PAR 2:45

GOAL 1: GOAL 2: GOAL 3: PS:

322- 5 SHOW REMAINDER 12 (.47) 31300 BUM 0:12

GOAL 1: GOAL 2: GOAL 3: A4 PS:

322- 6 MATHMAN: SQUARE NUMBERS #2 20050 ANI 1:18  
 Mathman plays a video game in which he must eat all  
 square numbers.

GOAL 1: C GOAL 2: GOAL 3: B2 PS:

322- 7 MATHNET-STRATEGIC WEATHER INITIATIVE-2 30032 NET 13:04  
 Gathering facts about distance/rate/time and traffic,  
 and playing What If, the Mathnetters start the search  
 for the truck which carried the plane. The plane will  
 explode if it is not cooled properly.

GOAL 1: A GOAL 2: A1 B1 B2 B3 C1a GOAL 3: B1 C1 C3 PS: X  
 C4b D3 F5 G4

322- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

323- 1 SHOW OPEN

15950 BUM 0:46

GOAL 1:

GOAL 2:

GOAL 3:

PS:

323- 2 CLOSE CALL #6 (SEASON 3)

30390 GAM 7:25

Students compete against each other trying to get the closest estimate to: Marshmallows on Rocket, Area of Painting, and Lights in Ball Player's Face.

GOAL 1: C

GOAL 2: A1 B2

GOAL 3: C1 C2 C3 PS: X  
A4

323- 3 MICHIGAN STADIUM: HAMBURGERS (3.7 BILL)

30950 LAF 1:36

The following question is posed to the viewer: How many hamburgers would it take to fill the Michigan Stadium?

GOAL 1:

GOAL 2: A1 C1e

GOAL 3: C2 C3 PS: X

323- 4 BLACKSTONE: 1089

10372 STU 3:14

Blackstone asks the spectator to take a 3 digit number, reverse the digits, subtract the smaller from the larger, reverse those digits (treat it as a 3-digit number), and gets the answer 1089.

GOAL 1:

GOAL 2:

GOAL 3: D2 G2 B1 PS:

323- 5 WANG SPOT: PAPER ROUTE

30410 LAF 1:33

A girl describes to a boy how she worked out the increased revenue which would accrue from the addition of 43 drops on her paper route.

GOAL 1: A C

GOAL 2: A1 B1 B3 B4 C1c GOAL 3: A3 A4 B1 PS: X  
C2a C2c D4

323- 6 PERSON ON THE STREET: WALK 1000 FEET

31060 LAF 1:05

People on the street are asked: If you walk 1000 feet, you'll go about 4 city blocks. How far will you go if you walk one million feet? One billion feet?

GOAL 1: C

GOAL 2: A1 B1 B2 B4

GOAL 3: A1 B4 D1 PS: X

# SQUARE ONE TV RUNDOWNS

323- 7 MATHNET-STRATEGIC WEATHER INITIATIVE-3 30033 NET 12:24  
Mathnetters use directional signals taken from two locations to triangulate and locate the plane. They find the truck, but no plane. Meanwhile, a terrorist group is trying to sell the plane.

GOAL 1: A GOAL 2: A1 B1 B3 C1a C3b C4b GOAL 3: C1 C3 G4 PS: X

323- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

324- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

324- 2 NEIGHBORHOOD SUPERSPY 12150 SON 3:50  
A super spy sings about creating a code that assigns a number to each letter of the alphabet. According to this code, a sequence of numbers would read as a word.

GOAL 1: A C GOAL 2: GOAL 3: D2 D1 PS:

324- 3 POS-NEG JOUST: STRAIGHT AHEAD -7 PLUS +5 15291 ANI 0:32  
When seven 'negative' clay-mation creatures attack five 'positive' clay creatures, two 'negative' creatures remain.

GOAL 1: A GOAL 2: GOAL 3: A6 B1 PS:

324- 4 WHAT'S MY NUMBER?: 30 30620 GAM 2:42  
Contestants try to find the secret number from a group of 25 by eliminating subsets which do not contain that number.

GOAL 1: A C GOAL 2: A1 B3 B6 C1c C2c GOAL 3: B2 D1 G6 PS: X

# SQUARE ONE TV RUNDOWNS

324- 5 POS-NEG JOUST: PARATROOPERS +5 PLUS -3 15294 ANI 0:21  
When five "positive" clay-mation creatures parachute onto three "negative" creatures, two "positive" creatures remain.

GOAL 1: A GOAL 2: GOAL 3: A6 B1 PS:

324- 6 BEAZLEY & THE NUMBERS: 256 30820 ANI 1:44  
Beazley is shown a list of eight numbers. He asks 3 questions, each reducing the list by half, to find the secret number.

GOAL 1: C GOAL 2: A1 B3 C1c C2c GOAL 3: A3 B2 B1 PS: X  
C3c

324- 7 POS-NEG JOUST: TAKING BREAK -12 PLUS +1 15293 ANI 0:24  
When one "positive" clay-mation creature suddenly appears amongst 12 "negative" clay-mation creatures, 11 "negative" creatures remain.

GOAL 1: A GOAL 2: GOAL 3: A6 B1 PS:

324- 8 MATHNET-STRATEGIC WEATHER INITIATIVE-4 30034 NET 17:16  
Inventor shows that his plane has never been launched. Mathnetters return to truck for more clues and use odometer readings to narrow their search. They check warehouses but find nothing.

GOAL 1: A GOAL 2: A1 A2 B1 B3 B4 GOAL 3: B1 C3 F3 PS: X  
C1a C3b C4a C4b

324- 9 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

325- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

325- 2 MATH-ZA-POPPIN' #6 30770 STU 5:27  
Jannette Nelson and Eddy MacDonald sing "Why do I love math?"

GOAL 1: A C GOAL 2: B1 GOAL 3: PS:

325- 3 MATHMAN: MULTIPLES OF 4 15640 ANI 1:15  
Mathman plays a video game in which he must eat only multiples of four.

GOAL 1: C GOAL 2: GOAL 3: B2 PS:

325- 4 PIECE OF THE PIE #2 (SEASON 3) 30260 GAM 7:11  
Two teams guess the top answers to the survey question "Name your least favorite vegetable." Team that earns greater percentage guesses top answer to one of senses, animal with fur, in desk drawer.

GOAL 1: A C GOAL 2: A1 B3 B6 C3b D2 GOAL 3: A5 B1 D1 PS: X  
F6

325- 5 MATHNET-STRATEGIC WEATHER INITIATIVE-5 30035 NET 11:46  
Mathnetters, disguised as potentates of the country purchasing the plane, are taken to its hiding place on an aircraft carrier. They successfully launch the plane before it explodes.

GOAL 1: GOAL 2: B1 GOAL 3: A2 PS: X

325- 6 CREDITS 31250 BUM 1:36

GOAL 1: GOAL 2: GOAL 3: PS:

325- 7 SHORT FRIDAY CLOSE 31370 BUM 0:22

GOAL 1: GOAL 2: GOAL 3: PS:

326- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:



# SQUARE ONE TV RUNDOWNS

- 326- 2 OLD PHILOSOPHER 1 31070 STU 2:14  
The Old Philosopher helps viewers out of trouble by reminding them of the formula for the area of a rectangle.  
GOAL 1: A C GOAL 2: A1 B1 B4 GOAL 3: D4 G6 PS: X
- 326- 3 MATHMAN: PERCENTAGES LESS THAN  $1/2$  15720 ANI 1:13  
Mathman plays a video game in which he eats percentages less than  $1/2$ .  
GOAL 1: C GOAL 2: GOAL 3: A5 D1 PS:
- 326- 4 PERCENTS 15380 SON 2:25  
This glitzy song expresses the relations among percents, fractions, and decimals.  
GOAL 1: A C GOAL 2: GOAL 3: A5 A3 A4 PS:
- 326- 5 SHOW REMAINDER 13 ( $73/100$ ) 31310 BUM 0:07  
GOAL 1: GOAL 2: GOAL 3: A3 PS:
- 326- 6 SQUARE ONE CHALLENGE # 3 30177 GAM 8:18  
Two students try to determine whether each of two cast members is bluffing or telling the truth when answering the questions: Hole Punch, Leftie/Rightie, and Spinner with Bar Charts.  
GOAL 1: GOAL 2: GOAL 3: PS:
- 326- 6 SQUARE ONE CHALLENGE # 3 QUESTION 1 30171 SOS  
A piece of paper is folded in half three times, and a hole is punched through it. How many holes will there be when the paper is unfolded?  
GOAL 1: C GOAL 2: A1 B4 C1e C2c C3a GOAL 3: B1 G2 PS: X

# SQUARE ONE TV RUNDOWNS

- 326- 6 SQUARE ONE CHALLENGE # 3 QUESTION 2 30172 SOS  
Six players on a baseball team are right-handed, and three are left-handed. What fraction of the line-up are righties?
- GOAL 1: C GOAL 2: A1 B4 C1e C2c GOAL 3: A3 PS: X  
D3
- 326- 6 SQUARE ONE CHALLENGE # 3 QUESTION 3 30173 SOS  
A spinner has six equal regions. One region is green, two are blue, and the other three are red. Which of two graphs is more likely to show the results of 600 spins?
- GOAL 1: C GOAL 2: A1 B5 C1d C2c GOAL 3: A3 F4 F5 PS: X  
F6
- 326- 7 MATHNET-CASE OF THE MASKED AVENGER-1 30081 NET 13:14  
The Masked Avenger is being blackmailed by The Mob into throwing a championship wrestling match. He arranges a meeting with Mathnetters through a coded message.
- GOAL 1: GOAL 2: A1 B3 B6 GOAL 3: F4 PS: X
- 326- 8 SHORT CLOSE 31230 BUM 0:31
- GOAL 1: GOAL 2: GOAL 3: PS:
- 327- 1 SHOW OPEN 15950 BUM 0:46
- GOAL 1: GOAL 2: GOAL 3: PS:
- 327- 2 CLOSE CALL #3 (SEASON 3) 30360 GAM 7:52  
Students compete against each other trying to get the closest estimate to: Jellybeans in Rock Star Portrait, Length of Yarn in Dog's Sweater, and Percent of Mathmen Destroyed.
- GOAL 1: C GOAL 2: A1 B2 GOAL 3: A5 C1 C2 PS: X  
C3

# SQUARE ONE TV RUNDOWNS

- 327- 3 WORKING BACKWARDS 30090 SON 2:49  
 In this song, the Fat Boys figure out what time they need to start preparing for their performance by taking apart their day. They figure the time needed to sleep, eat, put on make-up, and rehearse.  
 GOAL 1: A C GOAL 2: A1 B2 B4 C1b C1c C2c GOAL 3: A3 B4 PS: X
- 327- 4 MATH-ZA-POPPIN' #8 30790 STU 4:57  
 Pledge Central asks people to tell 12 of their friends to watch Square One. A chart of the powers of 12 is used to show how quickly the news would spread.  
 GOAL 1: A C GOAL 2: B2 C1c C2c GOAL 3: B1 C3 D2 PS:
- 327- 5 POS-NEG JOUST: TWO ON ONE +3 PLUS -6 15292 ANI 0:32  
 When six "negative" clay-mation creatures attack three "positive" clay creatures, three "negative" creatures remain.  
 GOAL 1: A GOAL 2: GOAL 3: A6 B1 PS:
- 327- 6 MATHNET-CASE OF THE MASKED AVENGER-2 30082 NET 11:07  
 George makes a bracket of the wrestling tournament. Mathnetters discuss the odds and how the tournament works. Masked Avenger defeats blackmailers by telling the press himself. His car is blown up.  
 GOAL 1: A GOAL 2: A1 B1 B4 C1b C2c GOAL 3: B1 B5 E2 F4 F5 PS: X
- 327- 7 SHORT CLOSE 31230 BUM 0:31  
 GOAL 1: GOAL 2: GOAL 3: PS:
- 328- 1 SHOW OPEN 15950 BUM 0:46  
 GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

328- 2 RAPPIN' JUDGE 14740 STU 2:40  
A judge raps his decision that a girl on a skateboard could not have committed the crime because she could not have travelled 8 miles in 2 hours if she were only going 3 miles per hour.

GOAL 1: A C GOAL 2: A1 B1 B3 B4 D1 GOAL 3: B5 C2 B1 PS: X  
C1a

328- 3 DIRK NIBLICK: TOO MANY COOKOUTS (PART 1) 30111 ANI 5:31  
Dirk saves Mr. Beazley money by showing him how to find the smallest number of packages of wienies and buns needed to feed his guests. Wienies come 12 to a pack, and buns come 8 to a pack.

GOAL 1: A B GOAL 2: A1 B1 B4 B6 C1c GOAL 3: B1 B2 PS: X  
C2c D1

328- 4 WHAT'S MY NUMBER?: 32 30640 GAM 2:35  
Contestants try to find the secret number from a group of 25 by eliminating subsets which do not contain that number.

GOAL 1: A C GOAL 2: A1 B3 B6 C1c GOAL 3: B2 D1 D2 PS: X  
C2c G6

328- 5 DIRK NIBLICK: TOO MANY COOKOUTS (PART 2) 30112 PAR 2:55

GOAL 1: GOAL 2: GOAL 3: PS:

328- 6 MATHNET-CASE OF THE MASKED AVENGER-3 30083 NET 13:13  
Mathnetters receive coded message that the Avenger has refused to meet the Mob. His daughter's dog is snatched. They use distance/rate/time and traffic conditions to restrict location of dognappers.

GOAL 1: A GOAL 2: A1 A3 S1 B2 B3 GOAL 3: B1 B4 F3 PS: X  
B4 C1a F4 G6

328- 7 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

329- 1 SHOW OPEN

15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

329- 2 MATH-ZA-POPPIN' #3

30740 STU 4:58

Pledge Central uses bar chart to show pledges for 5 days - there is an upward trend. Letter from gray-haired lady tells how her son was reformed because of his enthusiasm for mathematics.

GOAL 1: A C GOAL 2: C1c C2c GOAL 3: A5 F5 F6 PS:

329- 3 PERSON ON THE STREET: STACK B'BALL CARDS

31030 LAF 0:45

People on the street are asked: A stack of one thousand baseball cards is about one and a half feet high. If you stack one million cards, how high would that pile be?

GOAL 1: C GOAL 2: A1 B2 D2 GOAL 3: A1 B4 D1 PS: X

329- 4 INSERT: QUEEN-WON'T SOLVE ALL

31215 BUM 0:11

"Math won't solve all your problems but it comes pretty close."

GOAL 1: A C GOAL 2: GOAL 3: PS:

329- 5 MICHIGAN STADIUM: CARDS (790 THOU)

30930 LAF 1:37

The following question is posed to the viewer: How many baseball cards would it take to cover the entire playing field of Michigan Stadium?

GOAL 1: GOAL 2: A1 C1e GOAL 3: C2 C3 PS: X

329- 6 LEMONADE STAND IN THE DESERT

14340 STU 2:46

Shari Belafonte Harper runs a lemonade stand that sells lemonade for 26¢ of one dollar. She and Arthur discuss percent and decimal relations - especially as they pertain to money.

GOAL 1: A C GOAL 2: A1 B4 C2a GOAL 3: A5 D1 A3 PS: X

# SQUARE ONE TV RUNDOWNS

329- 7 WANG SPOT: LEMONADE 30400 LAF 1:25  
 Girl describes to a boy how she convinced her brother to give her a loan for her lemonade stand by computing how much profit she would earn.

GOAL 1: A C GOAL 2: A1 B2 B3 B4 C1c C2c D1 GOAL 3: A4 B1 B4 D4 PS: X

329- 8 MATHMAN: SHOW INTERRUPT #1 (45%) 20190 ANI 0:28  
 Mathman is told that 45% of the show has elapsed and must decide what percent remains.

GOAL 1: C GOAL 2: GOAL 3: A5 PS:

329- 9 BUT WHO'S COUNTING?: LARGEST EVEN 30520 GAM 4:14  
 Players arrange five randomly chosen digits in an attempt to form the largest possible even five-digit number. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B4 B5 C1b C2a C2c D2 GOAL 3: A2 B2 D1 F4 PS: X

329- 10 MATHNET-CASE OF THE MASKED AVENGER-4 30084 NET 10:57  
 George meets with The Mob dressed as the Avenger, wearing microphone and camera. They tell him to lose the fight or else. Mathnetters begin to see pattern in results of tournament and Mob threats.

GOAL 1: GOAL 2: B1 C1c C4b GOAL 3: A3 PS: X

329-11 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

330- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

- 330- 2 MATHMAN: MULTIPLES OF 6 15680 ANI 0:57  
Mathman plays a video game in which he must eat only multiples of 6.
- GOAL 1: C GOAL 2: GOAL 3: B2 PS:
- 330- 3 PIECE OF THE PIE #4 (SEASON 3) 30280 GAM 4:58  
Two teams guess the top answers to the survey question "Name something lots of kids collect." Team that earns greater percentage guesses top answer to flower, find in ocean, put ketchup on.
- GOAL 1: A C GOAL 2: A1 B6 C3b D1 GOAL 3: A5 B1 D1 PS: X  
F6
- 330- 4 PERSON ON THE STREET: TYPE 1000 PAGES 31050 LAF 0:50  
People on the street are asked: If you could type 1000 pages a month, how long would it take to type one million pages? One billion pages?
- GOAL 1: B C GOAL 2: A1 B2 GOAL 3: A1 B4 D1 PS: X
- 330- 5 MATHNET-CASE OF THE MASKED AVENGER-5 30085 NET 19:04  
Mathnetters use map, traffic conditions, and distance/rate/time to outline location of Avenger's kidnappers. While Kate locates Avenger, George "fights" Dr. Snooze in Avenger's place.
- GOAL 1: GOAL 2: A1 B1 B3 C1a GOAL 3: PS: X  
C3a C4b
- 330- 6 CREDITS 31250 BUM 1:36
- GOAL 1: GOAL 2: GOAL 3: PS:
- 330- 7 SHORT FRIDAY CLOSE 31370 BUM 0:22
- GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

331- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

331- 2 DIRK NIBLICK: BICYCLE FOR TWO (PART 1) 30071 ANI 9:13  
Dirk helps Fluff and Fold lay out two ways to finance payment for a bicycle. They can wait until they've saved the \$120, or take the bike now for \$20 and pay the rest plus interest over a year.

GOAL 1: A GOAL 2: A1 B1 B3 B4 C1c GOAL 3: A5 B1 F5 PS: X  
C2c C4a D2

331- 3 DROPPED COIN 14040 LAF 1:31  
A boy and a girl use subtraction to figure out how much money the boy dropped down a street grate, if he started with \$1.69 and now has \$1.44.

GOAL 1: A C GOAL 2: A1 B4 C1e GOAL 3: B1 PS: X

331- 4 DIRK NIBLICK: BICYCLE FOR TWO (PART 2) 30072 PAR 1:39

GOAL 1: GOAL 2: GOAL 3: PS:

331- 5 SHOW REMAINDER 15 (45.9%) 31330 BUM 0:08

GOAL 1: GOAL 2: GOAL 3: A5 PS:

331- 6 PERSON ON THE STREET: BIKE 20 MILES 31040 LAF 1:10  
People on the street are asked: If you ride your bike 20 miles per week, then it will take about one year to ride 1000 miles. How long will it take to ride one millllion miles? One billion miles?

GOAL 1: B C GOAL 2: A1 B1 B2 B4 GOAL 3: A1 B4 D1 PS: X



# SQUARE ONE TV RUNDOWNS

331- 7 MATHNET-CASE OF SWAMI SCAM-1 30011 NET 13:32  
Mathnetters interview 3 people who paid a Swami \$5000 for the name of a horse that would win a race. Looking for patterns, they notice that all of the victims are lawyers.

GOAL 1: GOAL 2: A1 B1 B3 C3a GOAL 3: PS: X

331- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

332- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

332- 2 DIET LITE WET 14230 STU 3:22  
As the characters attempt to shoot a commercial for Diet Lite Wet, they note the equivalence of fraction, decimal, and percent.

GOAL 1: A C GOAL 2: GOAL 3: A3 A5 A4 PS:

332- 3 BEAZLEY & THE NUMBERS: 7 30830 ANI 1:43  
Beazley is shown a list of eight numbers. He asks 3 questions, each reducing the list by half, to find the secret number.

GOAL 1: C GOAL 2: A1 B3 C1c C2c C3c GOAL 3: A3 B2 PS: X

332- 4 MATH-ZA-POPPIN' #7 30780 STU 2:47  
Math riddles and pies in the face.

GOAL 1: C GOAL 2: B1 B2 GOAL 3: A3 PS:

# SQUARE ONE TV RUNDOWNS

332- 5 PERSON ON THE STREET: TIME 31000 LAF 1:01  
 People on the street are asked: It takes about 11 1/2 days for a clock to tick off one million seconds. How long does it take to tick off one billion seconds? One trillion?

GOAL 1: B C GOAL 2: A1 B2 GOAL 3: A1 B4 D1 PS: X

332- 6 BIG NUMBERS - MILLION/ BILLION/ TRILLION 30470 ANI 1:04  
 This segment compares the length of time a clock would take to tick off one million, one billion, and one trillion seconds.

GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:

332- 7 BUT WHO'S COUNTING?: SMALLEST MULT. OF 5 30540 GAM 4:27  
 Players arrange five randomly chosen digits in an attempt to form the smallest possible five-digit multiple of five. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B2 B4 C1b C2c D3 GOAL 3: A2 B2 B4 D1 F4 PS: X

332- 8 MICHIGAN STADIUM: FOOTBALLS (173 MILL) 30960 LAF 1:36  
 The following question is posed to the viewer: How many footballs would it take to fill the entire Michigan Stadium to the top?

GOAL 1: GOAL 2: A1 C1e GOAL 3: C2 C3 PS: X

332- 9 MATHNET-CASE OF SWAMI SCAM-2 30012 NET 10:50  
 Continuing to look for patterns and going back over the facts, Mathnetters discover that all letters were run through the same postage meter, and find that all sent \$5000 to same post office box.

GOAL 1: A GOAL 2: A1 B1 B3 C3a GOAL 3: F5 PS: X

332-10 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

333- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

333- 2 BLACKSTONE: CROSSED OUT NUMBERS 21020 STU 3:27  
Blackstone asks a spectator to pick out a number in each row of a 4x4 chart so that no two are in the same column. He correctly predicts that their sum is 34.

GOAL 1: GOAL 2: GOAL 3: D2 PS:

333- 3 OLD PHILOSOPHER 2 31080 STU 2:31  
The Old Philosopher describes to the viewer how to find the weight of a dog when a cat is also in the room. He shows how math solves the problem.

GOAL 1: A C GOAL 2: A1 B1 B3 C2c GOAL 3: C4 PS: X  
C4a

333- 4 INSERT: GENERAL-NEVER LOSE IT 31163 BUM 0:09  
"One of the best things about math is ... it is absolutely free and ... it's reuseable."

GOAL 1: C GOAL 2: GOAL 3: PS:

333- 5 SQUARE ONE CHALLENGE # 5 30190 GAM 7:41  
Two students try to determine whether each of two cast members is bluffing or telling the truth when answering the questions: Multiply by Zero, Temperature Drop, and Cube of Blocks.

GOAL 1: GOAL 2: GOAL 3: PS:

333- 5 SQUARE ONE CHALLENGE # 5 QUESTION 1 30191 SOS  
The integers 0, 1, 2, 3, 4, and 5, are added and then they are multiplied. Which is larger, the sum or the product?

GOAL 1: C GOAL 2: A1 B4 C3c GOAL 3: B1 PS: X

# SQUARE ONE TV RUNDOWNS

- 333- 5 SQUARE ONE CHALLENGE # 5 QUESTION 2 30192 SOS  
The temperature drops from twenty degrees to a temperature three degrees away from zero. How many degrees did the temperature drop? (Paintbox illustration.)
- GOAL 1: C GOAL 2: A1 B4 C1e C3c GOAL 3: A6 PS: X  
D2 D3
- 333- 5 SQUARE ONE CHALLENGE # 5 QUESTION 3 30193 SOS  
A cube made of blocks is painted with an orange design. How many of the blocks have the orange design on them?
- GOAL 1: C GOAL 2: A1 B4 C1e C4a GOAL 3: C2 G6 PS: X
- 333- 6 YES, GENERAL, SIR 12960 STU 1:52  
A private demonstrates the six different ways one can order the three words 'yes', 'general', and 'sir.' She also demonstrates this visually by arranging 3 fruits - apple, pear, and orange.
- GOAL 1: C GOAL 2: A1 B4 D1 D4 C1e GOAL 3: E1 PS: X
- 333- 7 MATHNET-CASE OF SWAMI SCAM-3 30013 NET 11:51  
Looking at the Racing Form, and discussing the odds, Mathnetters figure someone must have gotten a winning horse. Grecco reports on a random sample which shows lawyers and number of letters received.
- GOAL 1: A GOAL 2: A1 B1 B3 C3a D3 GOAL 3: A5 F4 F5 PS: X
- 333- 8 LONG CLOSE 31240 BUM 0:44
- GOAL 1: GOAL 2: GOAL 3: PS:
- 334- 1 SHOW OPEN 15950 BUM 0:46
- GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

334- 2 EIGHT PERCENT OF MY LOVE 11480 SON 2:47  
Cris uses percentages to sing about the various ways his love is divided. As Cris mentions a percentage, a drummer displays the corresponding wedge of a pie chart.

GOAL 1: A C GOAL 2: GOAL 3: A5 F6 PS:

334- 3 STEPHAN'S STEREO 14220 STU 3:22  
As the characters attempt to shoot a commercial for Stephan's Stereo, they note the equivalence of decimal, fraction, and percent.

GOAL 1: GOAL 2: GOAL 3: A5 A4 A3 PS:

334- 4 INSERT: QUEEN-WON'T SOLVE ALL 31215 BUM 0:11  
"Math won't solve all your problems but it comes pretty close."

GOAL 1: A C GOAL 2: GOAL 3: PS:

334- 5 CLOSE CALL #1 (SEASON 3) 30340 GAM 6:34  
Students compete against each other trying to get the closest estimate to: Letters on the Page of a Book, Oranges to fill 8 Pitchers with Juice, and Chicks in a Pen.

GOAL 1: C GOAL 2: A1 B2 C2a GOAL 3: C2 C3 PS: X

334- 6 MATHNET-CASE OF SWAMI SCAM-4 30014 NET 14:14  
Mixed reviews of a play suggest that the Swami must have sent out letters covering all possible outcomes. Using logic and patterns they've found, they work backwards to spell out the scam in a chart.

GOAL 1: A GOAL 2: A1 B1 B3 C1c C2c C3a C4a C4b GOAL 3: B1 F5 F6 PS: X

334- 7 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

335- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

335- 2 ICE CREAM STORE: CALORIES 10130 STU 3:10  
A dieting woman enters an ice cream store run by a Valley Boy who uses a bar chart and percents to compare the calories of the various frozen treats.

GOAL 1: A C GOAL 2: A1 B3 D1 C1d GOAL 3: A5 A3 D1 PS: X  
F6

335- 3 WANNA BE 30140 SON 2:24  
This is a song which points out that whatever one wants to be, one needs to know math.

GOAL 1: A C GOAL 2: GOAL 3: PS:

335- 4 PIECE OF THE PIE #5 (SEASON 3) 30290 GAM 7:05  
Two teams guess the top answers to the survey question "Name something that needs a battery." Team that earns greater percentage guesses top answer to see in sky, instrument in orchestra, dog.

GOAL 1: A C GOAL 2: A1 B3 B6 C3b D2 GOAL 3: A5 B1 D1 PS: X  
F6

335- 5 MATHNET-CASE OF SWAMI SCAM-5 30015 NET 12:35  
In the last stage of the scam, the Swami promises the winning lottery number for half a million dollars. Mathnetters catch him when he comes to collect the money from George, disguised as Ms. Elmira.

GOAL 1: A GOAL 2: A1 B1 B3 C1c GOAL 3: B1 E1 F5 PS: X  
F6

335- 6 CREDITS 31250 BUM 1:36

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

335- 7 SHORT FRIDAY CLOSE

31370 BUM 0:22

GOAL 1: GOAL 2: GOAL 3: PS:

336- 1 SHOW OPEN

15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

336- 2 BUT WHO'S COUNTING?: LARGEST - CAST OUT 30530 GAM 4:56  
Players arrange five randomly chosen digits to form the largest possible five-digit number with a wild spin. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B4 B5 C1b C2c C4a GOAL 3: A2 D1 F4 PS: X

336- 3 INFINITY - THERE IS NO END 31110 SON 3:27  
This song uses several examples of large numbers to illustrate that infinity is not a large number. Several patterns for building sequences of whole numbers are used to suggest infinite sequences.

GOAL 1: B GOAL 2: GOAL 3: A1 B2 D1 D2 PS:

336- 4 OOPS! DECIMALS/MULTIPLICATION 4.3 x 2.6 16760 STU 1:51  
When a confused character puts the decimal point in the wrong place, disaster results.

GOAL 1: A GOAL 2: A1 A2 B4 D1 GOAL 3: A4 B1 PS: X

336- 5 MATHNET-CASE OF THE UNKIDNAPPING-1 30131 NET 16:46  
Eve, old college friend of Kate, describes the distribution of "points" for the Broadway play in which she is understudy for the star.

GOAL 1: C GOAL 2: A1 B4 GOAL 3: A5 B1 C1 C3 PS: X

# SQUARE ONE TV RUNDOWNS

336- 6 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

337- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

337- 2 BROADWAY 12530 STU 6:05  
Melody Tapshoes dances into the heart of H.H. Biggs, Broadway producer, when she belts out a number about Square Number patterns.

GOAL 1: B C GOAL 2: GOAL 3: B2 D2 G6 PS:  
B1

337- 3 WANG SPOT: PAPER ROUTE 30410 LAF 1:33  
A girl describes to a boy how she worked out the increased revenue which would accrue from the addition of 43 drops on her paper route.

GOAL 1: A C GOAL 2: A1 B1 B3 B4 C1c GOAL 3: A3 A4 B1 PS: X  
C2a C2c D4

337- 4 BUT WHO'S COUNTING?: LARGEST 5-DIGIT 30590 GAM 4:28  
Players arrange five randomly chosen digits to form the largest possible five digit number. To play, they must apply some knowledge of place value and probability.

GOAL 1: A C GOAL 2: A1 B4 C1b C2c GOAL 3: A2 D1 F4 PS: X

337- 5 MATHMAN: SHOW INTERRUPT #1 (45%) 20190 ANI 0:28  
Mathman is told that 45% of the show has elapsed and must decide what percent remains.

GOAL 1: C GOAL 2: GOAL 3: A5 PS:



# SQUARE ONE TV RUNDOWNS

337- 6 MATHNET-CASE OF THE UNKIDNAPPING-2 30132 NET 14:36  
Ms. Bacchanal is kidnapped. Stage manager shows Mathnetters his "eagle-mirrors" but they learn that these are blocked by scenery during the show.

GOAL 1: A GOAL 2: A1 B3 C3b C4b GOAL 3: A5 B1 G2 PS: X

337- 7 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

338- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

338- 2 OLD PHILOSOPHER 3 31090 STU 2:21  
Old Philosopher recalls for viewers many situations where math would have helped them. He points out that it is never too late to learn math.

GOAL 1: A C GOAL 2: GOAL 3: PS:

338- 3 PIECE OF THE PIE #3 (SEASON 3) 30270 GAM 5:44  
Two teams guess the top answers to the survey question "Name a sport without a ball." Team that earns greater percentage guesses top answer to cook eggs, take on vacation, find in a cave.

GOAL 1: A C GOAL 2: A1 B6 C3b D2 GOAL 3: A5 B1 D1 PS: X  
F6

338- 4 SHOW REMAINDER 14 (3/10) 31320 BUM 0:07

GOAL 1: GOAL 2: GOAL 3: A3 PS:

338- 5 MATHMAN: FRACTIONS LESS THAN 1/2 (REV.) 12490 ANI 1:49  
Mathman plays a video game in which he must eat only fractions less than 1/2.

GOAL 1: C GOAL 2: GOAL 3: D1 A3 PS:

# SQUARE ONE TV RUNDOWNS

338- 6 FRACTION RAP, THE 16710 SON 2:40  
Larry and Reg rap about fractions.

GOAL 1: A C GOAL 2: A1 A3 B4 D4 GOAL 3: A3 B1 PS: X

338- 7 MATHNET-CASE OF THE UNKIDNAPPING-3 30133 NET 14:07  
George uses floor plan to show how kidnapping could have occurred. Reminded of Stringbean case, Mathnetters try decoding tape of touch tones as phone number, alphabet code, then as letters on phone.

GOAL 1: A GOAL 2: A1 A3 B1 B3 B6 GOAL 3: B4 E1 F5 PS: X  
C1c C3a C4a C4b

338- 8 LONG CLOSE 31240 BUM 0:44

GOAL 1: GOAL 2: GOAL 3: PS:

339- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

339- 2 SPADE PARADE: IN SEARCH OF YUCCA PUCK -1 15901 STU 2:45  
Spade Parade takes on the case of Vanessa Van Vandervan who has hired 3 consultants to tell her the route to the Yucca Puck. She doesn't know which one tells the truth, which lies, and which does both

GOAL 1: A C GOAL 2: A1 A2 A3 B1 B3 GOAL 3: E3 PS: X  
D2 C1a C1e C3b

339- 3 TAPPIN' THE RHYTHM J1100 SON 3:20  
This is a song about the relationship between  $1/2$ ,  $1/4$ ,  $1/8$ , and  $1/16$  notes in music. A tapdancer taps out the beat for each of these fractions.

GOAL 1: B C GOAL 2: GOAL 3: A3 PS:

# SQUARE ONE TV RUNDOWNS

339- 4 SPADE PARADE: IN SEARCH OF YUCCA PUCK -2 15902 PAR 2:32  
 Spade Parade solves the case by asking several questions to sort out a declared liar, a truth-teller, and a third who sometimes tells the truth and sometimes lies.

GOAL 1: GOAL 2: GOAL 3: PS:

339- 5 INSERT: SAVION-USE MATH/ YOU'LL BE COOL 31220 BUM 0:15  
 "Math is a wonderful tool ... so use it and you'll be cool."

GOAL 1: A C GOAL 2: GOAL 3: PS:

339- 6 WHAT'S MY NUMBER?: 53 30660 GAM 3:00  
 Contestants try to find the secret number from a group of 25 by eliminating subsets which do not contain that number.

GOAL 1: A C GOAL 2: A1 B3 B6 C1c C2c GOAL 3: B2 D1 PS: X

339- 7 MATHNET-CASE OF THE UNKIDNAPPING-4 30134 NET 15:31  
 Using logic to eliminate many of the half a million possibilities, George decodes the message to find Ms. Bacchanal. She accuses Eve of leading the kidnapping.

GOAL 1: A GOAL 2: B1 B3 B6 C1c C3a C4b D1 GOAL 3: E1 F5 PS: X

339- 8 SHORT CLOSE 31230 BUM 0:31

GOAL 1: GOAL 2: GOAL 3: PS:

340- 1 SHOW OPEN 15950 BUM 0:46

GOAL 1: GOAL 2: GOAL 3: PS:

# SQUARE ONE TV RUNDOWNS

- 340- 2 BIG NUMBERS - MILLION 30420 ANI 0:23  
This segment shows the numeral for one million and tells the viewer that it takes a clock about eleven and a half days to tick off one million seconds.
- GOAL 1: GOAL 2: GOAL 3: A2 B4 PS:
- 340- 3 MATH-ZA-POPPIN' #1 30720 STU 4:00  
Pledge Central uses a pictograph to show the number of calls received per hour and a pie chart to show the percent of the goal reached. Larry estimates the distance from NYC to KY Derby using a map.
- GOAL 1: A C GOAL 2: B1 C1b C1c GOAL 3: A3 A5 C3 PS:  
F5 F6
- 340- 4 BIG NUMBERS - BILLION 30430 ANI 0:30  
This segment compares one billion to one million, and tells the viewer that one billion seconds is almost 32 years.
- GOAL 1: GOAL 2: GOAL 3: A2 B2 B4 PS:
- 340- 5 MICHIGAN STADIUM: P'PONG BALLS (24 BILL.) 30510 LAF 1:36  
The following question is posed to the viewer: How many ping-pong balls would it take to fill the Michigan Stadium to the top?
- GOAL 1: GOAL 2: A1 C1e GOAL 3: C2 C3 PS: X
- 340- 6 ANGLE DANCE 10180 SON 2:23  
The rock group Plane Geometry sings a song about angles and uses body movement to illustrate angles, as well.
- GOAL 1: B C GOAL 2: GOAL 3: G6 PS:
- 340- 7 MATHNET-CASE OF THE UNKIDNAPPING-5 30135 NET 17:07  
George ties himself up in same knots used on Ms. Bacchanal. Mathnetters play "What do we know," and check bank balances of show. They use logic to prove Ms. Bacchanal kidnapped herself.
- GOAL 1: A GOAL 2: B1 B3 B6 C1e GOAL 3: E1 F5 PS: X  
C4a C4b D1

**SQUARE ONE TV RUNDOWNS**

**340- 8 CREDITS**

**31250 BUM 1:36**

**GOAL 1:**

**GOAL 2:**

**GOAL 3:**

**PS:**

**340- 9 SHORT FRIDAY CLOSE**

**31370 BUM 0:22**

**GOAL 1:**

**GOAL 2:**

**GOAL 3:**

**PS:**